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ABSTRACT

The summary report describes a 5-year longitudinal study in Calgary (Alberta, Canada) of gifted and talented students from grade 9 through the post-high school year. Students had previously attended either a special school setting or were integrated with regular students in their home schools. The study examined: students' achievement; their progress and well-being in academic, social, and personal domains; course work; transition from junior high to senior high school; high school graduation; and preparedness for post-high school life. Subjective data obtained included the views of students, parents, and teachers over the 5 years. Objective data included student scores on tests and academic grades. Additional data included students' areas of strengths and weaknesses, choices made by students, activities engaged in, and recognitions they received. General findings included: students on the whole were successful, well-adjusted individuals; special school and mainstreamed students were comparable with respect to skills, abilities, and progress in academic, personal, and social domains; achievement of the two groups of students was generally comparable; students who had attended the special school were more likely to report satisfaction than mainstreamed students; and fewer special school than mainstreamed students reported social adjustment problems at the postsecondary level. (DB)

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A FIVE YEAR LONGITUDINAL STUDY OF GIFTED AND TALENTED STUDENTS

Grade 9 - Post-High School Year

VOLUME 6

SUMMARY REPORT

December, 1989

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VOLUME 6

Volume 6 of the six volumes produced in the longitudinal study of the gifted and talented students is a summary report of the findings obtained over the five year span of the study The summary is based on information presented in volumes one through five. Volumes 1, 2, 3, and 4, respectively, contain information obtained in the grade 9, 10, 12, and the post-high school year of the students Volume 5 amalgamates the information presented in volumes 1 through 4 and also presents the results of repeated measures statistical analyses conducted on data collected over the five year period.

ACKNOWLEDGEMENTS

The following people are deserving of recognition and thanks for their contribution to the five year study of gifted and talented students.

- The students and parents for their continued support of the study over the five years and their willingness to share their views with the Calgary Board of Education.

- Calgary Board of Education teaching and counselling staff for the time and energy they invested in providing information about the progress of the students over the five year period. A special thanks is extended to school staff who arranged questionnaire administration and interview sessions in their schools for the Program Evaluation team, and to those teachers instructing a sizable number of participating students who gave much of their valuable time to completing questionnaires for each of these students. Also, an appreciation is extended to secretarial and clerical staff in the schools who facilitated various organizational aspects of the study.

- Calgary Catholic Board of Education administration for their interest in the study and support of data collection from participating students who elected to attend Bishop Carroll High School in their senior years. A special thanks is extended to the Bishop Carroll Principal who facilitated data collection at the school and staff from the school who either participated in the study or who helped in its organization.

- Individuals who over the course of the study were asked to share their experiences and expertise. Included are members of the advisory committee for the study who offered input into its organization; the committee consisted of the Principal of Oakley Centre, the Supervisor of the Educational Services for the Gifted, the President of the Association for Bright Children, a parent representative from Oakley Centre, and a CBE psychologist. A special thanks is also extended to the group of parents and students who helped in the design of research instruments during the course of the study.

- Dr. G. Rowland, Professor, Department of Psychology, University of Psychology, for his advice in conducting data analyses for the study.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS i

I. INTRODUCTION 1

II. METHODOLOGY

A. Participants

1. Selection 6
2. Status of the Student Sample Over the Course of the study 7
3. Questionnaire Return and Interview Contact 10

B. Procedure

1. Survey and Interview Data 13
2. Standardized Test and Achievement Scores 20

III. SUMMARY OF FINDINGS

A. Background of Students 22

B. Directions Taken by the Students Over the Course of the Study 24

C. Assessment of Schools, Courses, Programs, and Student Progress

1. Selection of High Schools: Decision-making and Fulfillment of Expectations 33
2. Courses Taken in High School and Marks Achieved 35
3. Teacher Ratings of Student Progress 38
4. Student and Parent Ratings of Course Work 40
5. School Programs and Student Needs 43
6. Teacher Awareness Re: Students' Identification as Gifted/Talented 61
7. Parental Satisfaction with Schools and Services 61
8. Student Attitudes, Skills, Abilities, and Behaviour 63
9. Personal Problems 66
10. Retrospective Views in Grade 12 66

D. Post-High School Experiences
1. Post-Secondary Students 77
2. Graduates Not Attending Post-Secondary Institutions 84
3. Fourth Year Students 85
4. Parents of Graduates 87
E. CBE Students Behind One Year 90
F. CBE Drop-Outs 92
G. Calgary Students Who Attended Non-CBE Schools 94
H. Students Who Moved From Calgary 99
I. Student and Parent Views: Promoting Gifts/Talents of Students 102

IV. GENERAL FINDINGS 117

I. INTRODUCTION

The study is a follow-up of gifted/talented students over the course of a five year period extending from their grade nine year to one year following their graduation from high school. The grade nine students who began the study in 1984-85 included those from throughout the Calgary Board of Education (CBE) system who had been identified as gifted/talented. They composed two groups: one group, the Oakley Centre (OC) group, was in a congregated setting for gifted/talented students, and the second group (R) was integrated with regular students in home schools. Participants in the study were the students, their parents, and their teachers.

The study evolved in response to a recommendation proposed in the 1984 report, An Evaluation of Oakley Centre, which was prepared by the Program Evaluation Section of the CBE at the request of the Oakley Centre Steering Committee. The recommendation for,

> "longitudinal studies of gifted and talented students who participate in special programs in order to assess short and long term effects of the programming, possible program disjunctures in subsequent years, and to acquire retrospective views on the adequacy of Calgary Board of Education services as judged by students, teachers, and parents"

was one of several elements of a comprehensive plan proposed in the report to meet the needs of gifted and talented students throughout the system. Actions recommended in the comprehensive plan included the definition of the roles and responsibilities of Oakley Centre and the Education Assistance Service for the Gifted (EASG), and coordination of these service components in order to unite efforts in providing for the special needs of this group of students. The service components were opposites on a continuum of program delivery modes: whereas Oakley Centre served the gifted/talented in a congregated setting, EASG served the gifted/talented in mainstream schools.

Special education for the gifted/talented over the course of the participating students' years in school had undergone much change. During the students' elementary and junior high years, gifted education was expanding. EASG had extended its services from the feeder network

of one high school in CBE in 1976, to three in 1981, and system-wide in 1984. Oakley Centre had grown from services to grades four to six in its first year of operation in 1981 to its full complement of intended grades (three to nine) in its fourth year of operation in 1985. During the students' high school years, services for the gifted/talented were restructured and reduced. The Oakley Centre program was modified following controversy both at the school and Board level in the 1984-85 year which culminated in a change in the school's administration and termination of funding from the Kahanoff Foundation, CBE's partner in the school. Resultant effects included an increased staffing ratio at Oakley Centre and greater program alignment to that of regular schools. Also, following provincial cuts in educational funding in 1987, Oakley Centre was closed and its program relocated in Queen Elizabeth High School as the Gifted and Talented Education (GATE) Program. EASG too was affected by the budget cuts; in 1987 it was reduced to one staff member. These latter changes had greater impact on younger gifted/ talented students in the system than those participating in the study.

The setting from which the Oakley Centre students in the study came had a number of unique organizational and programming features. According to the information presented in the 1984 Oakley Centre evaluation:

- The Oakley Centre program was non-graded; students were organized into three houses which were equivalent to grades 3 - 4, grades 4 - 6, and grades 7 - 9. This arrangement allowed teachers flexibility to group students according to prevalent needs, e.g., accelerating or enriching the learning process for those who were advanced or remediating those with difficulties in a subject area, grouping those with similar interests for projects.
- The prescribed curriculum was compacted (i.e., completed in a shorter time period), and enrichment added in the form of special curriculum components, options, and independent study to challenge the students and enhance their learning.
- The seven period timetable was pre-empted for a four period schedule for one week two times in the school year. In the four period day, four options were studied over the week; at least half of the options were in an academic as opposed to life skill subject area. A four period day for options was also scheduled on a rotational basis (every sixth day) over the entire school year.
- Many on the Oakley Centre staff had received formal training in gifted education or had prior teaching experience in this area. The Kahanoff Foundation also allocated funds for staff development in gifted education.
- School objectives included helping students to gain an under-

standing of their own giftedness, to appreciate the worth of others, and to appreciate their obligations to the broader community and the world. Student development along these lines was encouraged in a homeroom activity labelled "flex" which was conducted on a 30 minute weekly basis.

The EASG role included a number of levels of involvement in schools and with gifted/talented students. Primary responsibilities were the identification of gifted/talented students, determination of their educational needs, and the development of strategies to meet these needs where additional stimulation was judged necessary. Strategies included EASG staff working directly with gifted/talented students on an individual or small group basis, or indirectly by assisting teachers to develop specialized programs or activities to supplement the students' educational experience. EASG also maintained a resource bank of materials for use by all who worked with gifted students, provided inservice to staff, and functioned as an advocate by increasing teacher, parent, and public awareness of the nature and special needs of gifted children. Students in the study in mainstream schools were those identified as gifted/talented by EASG. The extent of services these students received from EASG was dependent upon their needs and circumstances in their home schools.

Much of the thrust of the study evolved from uncertainties indicated in the 1984 Oakley Centre evaluation regarding the extent to which graduates of Oakley Centre (the first of whom were graduating in 1985) would encounter difficulties in adjusting in high school. Various respondent groups expressed concerns that the Oakley Centre experience would prove disadvantageous to its graduates:

- Staff feared that Oakley Centre students would experience difficulty in adjusting to differences (i.e., reductions) in high school compared to Oakley Centre in program flexibility, diversity, and emphasis placed on meeting the needs of the gifted and talented.
- External program evaluators suspected that Oakley Centre graduates would encounter difficulties in adapting to the learning environment in high school. According to their views, adjustment problems might arise from students' sense of loss of the supportive and personalized approach taken by Oakley Centre, the stimulation received from interacting with intellectual peers, and the challenge of the advanced level of studies promoted at Oakley Centre.
- Parents voiced fears that their children would not be sufficiently prepared to handle mainstream programming in high school after their

experiences in the unique Oakley Centre program. Furthermore, they were uncertain about what opportunities were available at the high school level and if these were sufficient to meet the needs of those who were gifted/talented.

However, it was also felt that difficulties would be ameliorated by various factors. In this regard, staff felt that effective learning skills and attitudes developed as a result of the Oakley Centre approach to studies would facilitate students' adjustment. The External Monitoring Committee also suggested that selection of a high school which best accommodated the needs of the student would minimize difficulties associated with the transition. A follow-up of potential advantages and disadvantages of the Oakley experience was included in the study. The design incorporated the two groups as comparisons to determine if the well-being of the gifted/talented who came from Oakley Centre was different from that of the gifted/talented who came from other schools.

The topics of research in the study included 1) a set of core areas on which a follow-up was conducted throughout the students' grade 9 to 12 years in school and 2) adjunct areas which were pertinent to specific time periods in the students' school life. The set of core areas examined students' achievement; their progress and well-being in academic, social, and personal domains; aspects of the course work taken by the students; and the programming opportunities encountered by the students. Adjunct areas pertained to such aspects as the transition from junior high to senior high school and students' adjustment, graduation from high school, and preparedness for post-high school life. Analyses included the investigation of group differences and differences across time with respect to core areas, and group differences with respect to adjunct areas.

Data obtained in the study consisted of both subjective and objective information. Subjective data were the views obtained from the students, parents, and teachers in surveys and interviews about aspects of students' progress and experiences over the five years. Objective data were marks and other measures of academic progress (credits, type of diploma awarded in high school) reported in students' school records. Also, students' scores on tests measuring cognitive abilities were obtained from school records. In this latter case, the scores were used to establish intellectual equivalency of the two groups at the outset of the study.

Data collected in the study also consisted of descriptive and evaluative information. Descriptions included such aspects as the students' areas of strengths and weaknesses; the choices they made over the course of the study with respect to schools attended and programs taken; the activities in which they engaged both in and out of school; the recognition they received with respect to awards, scholarships, and placing in contests or competitions; the paths they chose to follow in the post-graduation year; and their career aspirations. Evaluative information included an assessment of students' progress as determined by the marks they received in courses taken in high school, and participants' (i.e., students, parents, and teachers) assessment of schools, programs, courses, and students' progress in various domains over the course of the study.

Data collection periods in the study were conducted at transitional points in the students' academic careers: at the end of the students' grade nine, ten, twelve, and post-graduation year. Views of grade 11 were obtained from the respondents retrospectively.

II. METHODOLOGY

A. PARTICIPANTS

1. Selection

Participants in the study were the students, their parents, and their teachers. Their selection was based on the following.

Candidates for the study were all CBE students in grade nine in the 1984-1985 school year who had been identified as gifted or talented. This included grade nine Oakley Centre students and grade nine students attending other schools in the CBE system. Lists of these students were provided to Program Evaluation by Oakley Centre and EASG.

In total, 110 grade nine students (50 students in Oakley Centre and 60 students in other CBE schools) were identified as potential subjects for the study. Of these, 46 from Oakley Centre (8% refusal rate) and 45 from other schools (25% refusal rate) volunteered (with parental approval) to take part. Each of these groups was composed of approximately the same proportion of male and female students (i.e., 14 female students and either 31 or 32 male students in each group). Parents along with the students were invited to take part in the study.

Criteria for the selection of teachers were dependent upon various circumstances encountered during the course of the study. The selection processes and rationale were the following:

- CBE Teachers

  In 1985, three teachers from Oakley Centre provided information about the participating students from this school, whereas in the remaining schools, one teacher per student provided input. The Oakley Centre staff was small; teachers included in the study were those who knew the students well and who volunteered to take part in the study. In other junior high schools, the principal of the school was directed to identify a teacher who best knew the participating student and who also would be willing to take part. For both the student groups, it was assumed that a teacher with a close relationship with a student, built over the years in junior high, would have sufficient knowledge to comment on the various matters investigated in the study.

In 1986 and 1988, all teachers instructing each participating student were included in the study. In senior high, it was assumed that teacher knowledge of a student, at least in the early years in high school, would be limited to aspects of the student's performance in the individual teacher's class. Therefore, in order to gain a comprehensive view of a student's progress in high school, teachers in each of the subjects taken by a participating student were requested to take part.

In instances where a student had withdrawn from school or had not passed a grade, either a teacher or counsellor who had worked closely with the student was interviewed.

- Bishop Carroll Teachers

A small number of participating students chose to attend Bishop Carroll in their high school years. This Calgary Catholic Board of Education school offers an independent studies program in which teachers function mainly as resources for students.

Teacher selection at Bishop Carroll was as follows:

- In grade 10, an attempt was made to use a selection process which corresponded as closely as possible to that used in CBE schools. Staff requested to take part in the study were those identified by student participants as teachers who served as their principal resources for each of the subject areas taken in this grade.
- In grade 12, participating students' teacher-advisors were requested to take part in the study. This alternative was used as it was found that most of the teachers selected in grade 10 did not have extensive contact with the students and tended to not return their questionnaires.

2. Status of the Student Sample Over the Course of the Study

The status of the sample at each of data collection periods extending from 1985 to 1988 (in-school years) is presented in the following table. The table indicates the number of students within CBE schools and the number of students who left the CBE system during this time period. Further divisions within these two broad classifications specify the following:

Within CBE schools:

- students who were in the appropriate grade at the time of the data collection, i.e., 1985 junior high graduates who were in grade 10 in 1986 year, and in grade 12 in 1988.
- students who were behind a grade at the time of the data collection

Other:

- Calgary students who were enrolled in non-CBE schools, i.e., Bishop Carroll (BC) and a private school in Calgary. Also included in the category is one student who went to a private school in the USA but returned to his family in Calgary on holidays.
- students in Calgary who had withdrawn from school
- students who had moved from Calgary with their families

	Within CBE Schools					Other					
	Appropriate Grade			Behind		BC/Private		Withdrawn		Moved	
Year	Total	OC	R	OC	R	OC	R	OC	R	OC	R
1985	91	46	45								
1986	80	39	41		1	5	2		1	2	
1988	69	36[a]	33	1[b]	1	4[c]	2[ce]	1[d]	3[d]	4[e]	6[e]

[a] One student who had left Calgary at the conclusion of grade 9 returned to complete grades 11 and 12 in Calgary.

[b] This student returned to a CBE school after attending Bishop Carroll for one year.

[c] Four of the 6 Calgary students attending non-CBE schools in 1988 were at Bishop Carroll. All 7 in the 1986 year were at Bishop Carroll.

[d] Contact was lost for one data collection period with one student who had withdrawn from school. Efforts to locate a second student who had withdrawn were unsuccessful; Alberta Education records indicated that this individual had not continued his education anywhere in Alberta.

[e] Information gained from questionnaires and other sources indicate that 3 students (1 OC and 2 R) who had moved from Calgary and the student attending a private school in Calgary were behind a grade at the time of the data collection in 1988.

Students who had moved away from Calgary were in the following locations: British Columbia (4); Ontario (3); Quebec (1); Newfoundland (1); Florida (1)

The status of the student sample in 1989 (the post-high school year for graduates) is presented in the following table.

	Total		OC		R	
Major Occupation	N	%	N	%	N	%
High school graduates:						
- attending high school (upgrading diploma or average)	4	4	3	7	1	2
- attending university or college	57	63	31	67	26	58
- attending a technical institution	1	1			1	2
- working full time	6	7	4	9	2	4
- exchange student	2	2			2	4
- foreign travel, work, and studies	1	1			1	2
- unknown	2	2	1	2	1	2
Left Grade 12 without a diploma:						
- working	1	1			1	2
- unknown	1	1			1	2
High school students:						
- completing IB program - equivalent to grade 13 (in USA)	1	1	1	2		
- completing grade 12	6	7	3	7	3	7
- completing grade 11 (former drop-out returned to school)	1	1			1	2
Drop-outs						
- working full time	2	2	1	2	1	2
- unknown (lost contact)	1	1			1	2
Unknown (no information available):						
- moved away while in high school	5	6	2	4	3	7
Total	91	99	46	100	45	98

3. Questionnaire Return and Interview Contact

The following indicates the success rate of data collection from participants over the course of the study. Success rate is the percentage of the total number of participants (potential) from whom completed questionnaires or interviews (return) were obtained.

	Students								
	Total			OC			R		
	Potential	Return	Rate	Potential	Return	Rate	Potential	Return	Rate
Year	N	N	%	N	N	%	N	N	%
1985	91	91	100	46	46	100	45	45	100
1986									
• Within CBE:									
- appropriate grade	80	79	99	39	39	100	41	40	98
- behind	1	1	100				1	1	100
• Other:									
- Bishop Carroll (BC)	7	7	100	5	5	100	2	2	100
- withdrawn	1	1	100				1	1	100
- moved	2	0	0	2	0	0			
• Total	91	88	97	46	44	96	45	44	98
1988									
• Within CBE:									
- appropriate grade	69	66	96	36	35	97	33	31	94
- behind	2	2	100	1	1	100	1	1	100
• Other:									
- BC/Private	6	6	100	4	4	100	2	2	100
- withdrawn	4	2	50	1	0	0	3	2	67
- moved	10	4	40	4	1	25	6	3	50
• Total	91	80	88	46	41	89	45	39	87
1989									
• Calgary Graduates[1]	67	59	88	34	30	88	33	29	88
• Calgary students in high school:									
- in CBE[2]	5	5	100	3	3	100	2	2	100
- in BC/Private[2]	6	6	100	4	4	100	2	2	100
• CBE drop-outs	3	2	67	1	1	100	2	1	50
• Moved away	10	4	40	4	1	25	6	3	50
• Total	91	76	84	46	39	85	45	37	82

1 The classification "Calgary Graduates" includes students who graduated from CBE high schools and Bishop Carroll. It also includes 2 students (R) who left grade 12 without completing the requirements of a high school diploma (2 - 3 credits short of the 100 needed).

2 Includes 3 OC and 1 R 1988 graduates who returned for a fourth year in high school.

Parents

Year	Total Potential N	Total Return N	Total Rate %	OC Potential N	OC Return N	OC Rate %	R Potential N	R Return N	R Rate %
1985	91	55	60	46	22	48	45	33	73
1986									
• Within CBE:									
- appropriate grade	80	53	66	39	26	67	41	27	66
- behind	1	1	100				1	1	100
• Other:									
- Bishop Carroll (BC)	7	6	86	5	4	80	2	2	100
- withdrawn	1	1	100				1	1	100
- moved	2	0	0	2	0	0			
• Total	91	61	67	46	30	65	45	31	69
1988									
• Within CBE:									
- appropriate grade	69	52	75	36	25	69	33	27	82
- behind	2	2	100	1	1	100	1	1	100
• Other:									
- BC/Private	6	5	83	4	3	75	2	2	100
- withdrawn	4	2	50	1	0	0	3	2	67
- moved	10	4	40	4	2	50	6	2	33
• Total	91	65	71	46	31	67	45	34	76
1989									
• Calgary graduates[1]	67	48	72	34	21	62	33	27	82
• In Calgary schools:									
- CBE[2]	5	2	40	3	1	33	2	1	67
- BC/Private[2]	6	5	83	4	3	75	2	2	100
• CBE drop-outs	3	1	33	1	0	0	2	1	50
• Moved away	10	3	30	4	1	25	6	2	33
• Total	91	59	65	46	26	57	45	33	73

1 The classification "Calgary Graduates" includes parents of students who graduated from CBE high schools and Bishop Carroll. It also includes parents of 2 students (R) who left grade 12 without completing the requirements of a high school diploma.

2 Includes parents of 3 OC and 1 R 1988 graduates who returned for a fourth year in high school

Teachers

Year	Total Potential N	Total Return N	Total Rate %	OC Potential N	OC Return N	OC Rate %	R Potential N	R Return N	R Rate %
1985	91	91	100	46[a]	46	100	45	45	100
1986									
• Within CBE:									
- appropriate grade	657	544	83	334	268	80	323	276	85
- behind	1	1	100				1	1	100
• Bishop Carroll	40	24	60	32	20	63	8	4	50
1988									
• Within CBE:									
- appropriate grade	477	462	97	255	247	97	222	215	97
- behind	2	2	100	1	1	100	1	1	100
• Bishop Carroll	4	4	100	3	3	100	1	1	100
1989									
• Within CBE[b]	4	4	100	2	2	100	2	2	100

a Three Oakley Centre teachers provided information regarding the 46 students participating in the study.

b One TA and three guidance counsellors were interviewed regarding:
- three students who had returned for a fourth year, one to gain courses and credits for a general diploma, one to upgrade his general diploma to an advanced, and one to increase his overall average (for scholarship purposes).
- one student who had repeated his grade nine year.

Another staff member (a TA) was approached regarding a student who had not done well credit-wise in grade 10 and was in the process of completing his grade 12. An interview was not conducted as this individual indicated that contact with the student had been minimal over the 1988-89 school year.

B. PROCEDURE

1. Survey and Interview Data

The following outlines the procedures used to collect data from the students, parents, and teachers participating in the study. A more detailed account can be found in Volumes I, II, III, and IV which respectively contain the information compiled for data collection periods conducted in grade 9, grade 10, grade 12, and the post-graduation year.

Professionals who were involved in organizing and/or conducting the study and their tasks were as follows:

Year	Professionals	Tasks
1984-85 (Grade 9)	Supervisor, Program Evaluation	• Presentation of the research proposal to CBE senior administration (approval gained from the Chief Superintendent on Oct. 2, 1984) • Preliminary organization of the study (consultation with stakeholders of gifted programming[1], identification of the participants, design of research instruments and formulation of procedures)
	2 External researchers	• Data collection
	In-house researcher	• Analysis of grade 9 data and write-up of the results
1985-86 (Grade 10)	Supervisor, Program Evaluation, in-house researcher, external researcher	• Organization of a plan for the data collection period
	In-house researcher	• Preliminary preparation (location of students, identification of students' teachers)
	In-house and external researcher	• Construction of research instruments and procedures • Data collection
	In-house researcher	• Analysis of grade 10 data and write-up of the results

Year	Professionals	Tasks
1987-88 (Grade 12)	In-house researcher	• Preliminary preparation (location of students, identification of students' teachers) • Construction of research instruments and procedures • Data collection • Analysis of grade 12 data and write-up of the results
1988-89 (Post-graduation)	In-house researcher	• Preliminary preparation (location of students) • Construction of research instruments and procedures • Data collection • Analysis of the post-graduation data and write-up of the results • Analysis of longitudinal data and write-up of the overall report

1 Stakeholders formed an advisory commitee for the study. Included were the EASG Supervisor, the Principal of Oakley Centre, the President of the Association for Bright Children (ABC), a parent representative from Oakley Centre, and a psychologist.

Research Instruments

The research instruments used in data collection were questionnaires and interview protocols. The format and substance of the instruments were designed specifically for each of the respondent groups participating in the study. The process for developing the instruments generally entailed the following:

- identification of the issues to be investigated
- design of draft instruments for each respondent group
- pretesting of the instruments with a sample from the respondent groups
- revision of the instruments on the basis of the pre-testing information

Pretesting was conducted with instruments targeting the main body of students in the study but not those targeting the small groups (e.g., drop-outs, students behind a grade, students who moved from Calgary) which splintered from the main body.

The format of the research instruments used over the course of the study for each of the respondent groups is as follows.

Year	Target Group	Respondents	Format
1984-85	CBE students in grade 9	Students	Interviews
		Parents	Questionnaires
		Teachers	Interviews
1985-86	CBE and Bishop Carroll	Students	Questionnaires
1987-88	students in the appropriate grade (in grade 10 in 1986 and grade 12 in 1988)	Parent	Questionnaires
		Teachers*	Questionnaires
	CBE students behind one grade	Students	Interviews
		Parents	Questionnaires
		Teacher/Counsellor	Interviews
	Private school students	Students	Interviews[T]
		Parents	Interviews[T]
	Drop-outs	Students	Interviews[T]
		Parents	Interviews[T]
		Teacher/Counsellor	Interviews
	Students who moved from Calgary	Students	Questionnaires[M]
		Parents	Questionnaires[M]
1988-89	CBE and Bishop Carroll graduates	Students	Questionnaires[M]
		Parents	Questionnaires[M]
	CBE and Bishop Carroll fourth year high school students	Students	Interviews[B]
		Parents	Questionnaires[B]
	CBE students behind one grade	Students	Interviews
		Parents	Questionnaires
		Teacher/Counsellor	Interviews
	Private school students	Students	Interviews[T]
		Parents	Interviews[T]
	Drop-outs	Students	Interviews[T]
		Parents	Interviews[T]
	Students who moved from Calgary	Students	Questionnaires[M]
		Parents	Questionnaires[M]

* Exceptions were Bishop Carroll staff: in grade 12, students' teacher-advisors were interviewed.

T - Interviews by telephone.
B - Interviews were conducted by telephone with the students from Bishop Carroll; these students were not in regular attendance at the school. The students in CBE schools were interviewed by the researcher who travelled to the schools for the sessions.

B - The students in CBE schools were asked to deliver questionnaires to their parents. Questionnaires to parents of the Bishop Carroll students were sent and returned by mail.

M - Questionnaires were mailed to home addresses of the participants.

Topics addressed in research instruments targeting the main body of students were as follows:

1984-85 (Grade 9)

Research questions, for the most part, were directed toward obtaining information about the background of the students, the programs in which they had been involved in grade 9, and their progress/well-being in school. Topic areas addressed included:

- history of the student re: year and method of identification, length of time special attention had been received
- areas of giftedness, strengths and weaknesses of students
- general academic progress
- special programs/activities taken in grade 9, and student progress
- student general well-being in school
- assistance received by students for academic and personal problems
- ways of improving services/programs

Parents also rated the adequacy of school consultation/communication with parents.

1985-86 and 1987-88 (Grades 10 and 12)

Topics addressed in research instrument sets targeting CBE and Bishop Carroll students in the appropriate grade are outlined in the following:

Questionnaires sent to CBE teachers in 1986 and 1988 and to Bishop Carroll teachers in 1986 were essentially the same instrument. Topic areas addressed in this questionnaire were:

- programs, subject areas, and activities in which teachers instructed

students
- teacher awareness that students had been identified as gifted/talented
- extensiveness and adequacy of programming opportunities, program strengths and weaknesses
- students' academic achievement, abilities, skills
- student attitudes, abilities, skills, and behaviour: personal, social, academic

The interview questions presented to Bishop Carroll teacher-advisors in 1988 generally covered the same topic areas as those addressed in the teacher questionnaires.

The questionnaire presented to students in 1988 was a revision of the 1986 questionnaire. Some parts remained unchanged whereas others were deleted or added. Topics which were included at both time periods were the following:
- types of programs in which students were enrolled
- extensiveness and adequacy of programming opportunities provided by schools to meet students' needs
- lessons/courses taken outside of school
- course work: level of difficulty, teacher assistance, achievement, and satisfaction with achievement
- student experiences and attitudes: personal, social, and academic
- health and family problems
- adequacy of counselling assistance

Topics which were added in the 1986 and 1988 student questionnaires were the following:

In the 1986:
- process of selecting a high school
- degree to which high schools met initial expectations
- adjustment to high school

In 1988:
- student transfer to other high schools since grade 10
- distinctions received during high school years (awards, scholarships, winning of contests or competitions, leadership positions held)
- skipping/repeat of courses
- quality of the education received
- benefits/drawbacks of special programs taken during high school years
- positives/negatives of the course of studies selected in high school
- generation/loss of interests in areas of study in high school years
- carry-over effects from junior high years
- changes which would made if school years were repeated
- highly satisfactory aspects of the education provided to gifted

students and aspects highly in need of improvement
- preparation and plans for the future

Topic areas in the 1986 and 1988 parent questionnaires generally were subsets of those addressed in the student questionnaires. Other areas included in the parent questionnaires dealt with parental satisfaction with schools and services.

1988-89 (Post-Graduation)

Topic areas addressed in the research instrument sets targeting Calgary graduates (CBE and Bishop Carroll) were the following:

In student questionnaires:
- Background information:
  - major activity or occupation since graduation
  - domicile
  - recognition received (scholarships/bursaries, awards, winnings, leadership positions held)
  - lessons or courses taken on a private basis
- Full time post-secondary students:
  - acceptance into universities of choice
  - university attended and program of studies taken
  - status in university (registry for a full year, selection of desired courses, application for advanced standing, courses passed, class standing, GPA)
  - satisfaction with level of achievement
  - adjustment to post-secondary studies/social life
  - enjoyment of studies and campus life
  - jobs held while in university
  - plans for the future
- Students not engaged in full time studies:
  - applications made to post-secondary institutions
  - employment history since graduation and plans
  - course work conducted since graduation
  - future plans re: post-secondary studies
- Preparation for post-high school endeavours
- Positive and negative carry-over effects from public school years
- Changes in oneself experienced over the past year
- Extent of advancement of gifts/talents and factors affecting success in reaching potential
- Advice to schools (re: educating the gifted) and to gifted students

In parent questionnaires:

- Background of students
- Preparation for post-high school endeavours, student success, and factors contributing to degree of success
- Changes perceived in the students in the past year
- Extent of advancement of gifts/talents and factors affecting students' success in reaching their potential
- Advice to schools (re: educating the gifted) and parents of gifted students

Research questions posed in instrument sets for the remainder of the target groups were specific to their particular circumstances. An outline of the questions is available in Volumes II, III, and IV of the study which contain detailed information regarding data collection in grade 10, 12 and the post-graduation year.

Administration of research instruments

Procedures used to administer questionnaires and to conduct interviews were dependent upon the respondent group and its particular circumstances. An outline of these procedures is presented in the following. (For more detail, please consult Volumes I, II, III, and IV of the study.)

a. In-school student questionnaire administration

Schools were contacted to schedule sessions with the participating students. The researcher(s) travelled to the schools and supervised the students' completion of the questionnaires. Students at these sessions were asked to deliver questionnaires to their parents and to return them to the school on completion to be forwarded to Program Evaluation.

b. Teacher questionnaires

Teacher questionnaires were sent to their schools and returned via inter-school mail. In the grade 10 year, questionnaires were distributed in June. In the grade 12 year, they were distributed in two blocks: one at the conclusion of the first semester, and the second at the conclusion of the school year. The change in procedure in the grade 12 year was recommended by teachers instructing in semestered schools.

Memos were distributed to teachers whose questionnaires were overdue, reminding them to complete and return the questionnaires. These were followed by telephone calls in instances where questionnaires remained overdue.

Questionnaires to teachers of Bishop Carroll students in grade 10 were distributed and returned via this school board's inter-school mail system.

c. In-School Interviews

Arrangements were made with schools to interview students and staff at their convenience. The interviews were conducted on an individual basis at the schools. Interviews conducted ranged from structured with members of large respondent groups (i.e., the intact grade 9 sample of students and their teachers) to semi-structured with members of splinter groups which evolved over the course of the study. Students at these sessions were asked to deliver questionnaires to their parents and to return them on completion to the school to be forwarded to Program Evaluation.

d. Telephone Interviews

Telephone interviews were scheduled with students and parents at their convenience. Interviews were semi-structured.

e. Mailed questionnaires to students and parents.

Return envelopes with pre-paid postage were provided for the return of questionnaires. Reminders were sent in instances where respondents had not returned completed questionnaires within specified time periods.

2. Standardized Test and Achievement Scores

Analyses were performed to determine differences between the two groups with respect to their cognitive abilities and achievement level. Cognitive abilities were measured by students' performance on the Canadian Cognitive Abilities Test (CCAT) and the Nelson Reading Test. Achievement levels were the marks students attained in their courses.

Cognitive Abilities

An estimate of students' cognitive abilities was required in order to establish the equivalency of the two groups of students at the outset of the study. The initial intent was to use, solely, students' IQs for this purpose as IQ generally was the measure by which a student had been judged as gifted/talented. However, the validity of their use was questioned to some extent by the discovery of the following:

1. Two types of tests had been used to measure students' IQs: WISC-R and the Stanford-Binet. These two tests are not entirely equivalent according to the research literature.
2. IQ test results could not be located for nine students.
3. A number of students had been tested in early grades: 3 in grade 1, 7 in grade 2, and 9 in grade 3. The reliability of results of testing of students in early grades has been questionned by some authorities.

Because of these problems, other available measures of students' cognitive abilities (i.e., the CCAT and the Nelson Reading Test) were used to guage the comparability of the two groups. The CCAT had been administered to all students in the CBE system in grade 7, and the Nelson Reading Test in grade 8.

Student Achievement

One objective of the study was to follow the progress of students in academic course work from grade 9 through to grade 12. The initial intent was to use CBE cumulative records as the source for information about student progress (e.g., marks achieved in courses and credits obtained). However, these records were found to be incomplete; the problems encountered and their impact were the following:

1. The grade 9 marks for OC students were not listed on the students' cumulative records and unfortunately, Oakley Centre's student files were lost when the school was closed and its program moved to a new location. As a result, junior high baseline measures of students' achievement could not be established.
2. CBE cumulative records did not (consistently) list the courses students had taken in summer school or the courses taken by correspondence. Incomplete records necessitated acquiring student transcripts from Alberta Education.

III. SUMMARY OF FINDINGS

A. BACKGROUND OF STUDENTS

Analyses conducted on students' scores on standardized tests indicated:

1. no significant differences between the groups with respect to their cognitive abilities as measured by the CCAT and the Nelson Reading Test
2. mean values for each of the groups were high, ranging from the 85th to 95th percentile in the three subscales of the CCAT (Verbal, Quantitative, and Non-Verbal) and the two subscales of the Nelson Reading Test (Vocabulary and Paragraph Comprehension).

The scores of the majority (from 72% to 90%) of the total number of students fell within the fourth quartile (75th up to the 100th percentile) in each of the subscales of the two tests, with a major portion (from 6% to 18%) of the remainder falling within the third quartile (50th up to the 75th percentile). A small percentage (from 4% to 12%) of the scores fell below the 50th percentile.

Information obtained from the participants and records indicated that compared to the R group, the OC group, on average:

1. was tested for giftedness in an earlier grade, and
2. received special instruction for giftedness for a longer period of time.

Mean values with respect to grades in which students were tested were 4.4 for the OC group and 5.6 for the R group. Mean values with respect to length of time special instruction was received as of the end of grade nine were 4.7 years for the OC group and 1.9 years for the R group. The differences in both these instances were significant.

The grades in which OC students were tested ranged from grade one to grade nine. One-third was tested in early elementary grades (1 to 3), a little more than one-half (57%) in late elementary grades (4 to 6), and the remainder (11%) in junior high grades. With respect to the R group, a small percent (13%) was tested in early elementary grades, and a large percent in late elementary grades (56%) and junior high (24%). The remainder (4 R) apparently had not been tested prior to the beginning the study, and with the exception of one who ultimately was tested in grade 10, were not processed in later grades. These latter students apparently were waitlisted for testing by EASG and were not reached as intended. The CCAT scores indicate that these students

tested at the 99th percentile in at least one of the subscales.

The length of time reported by the OC students with respect to the special instruction they had received spanned their years in school. That reported by the R students ranged from never (16%) to four years, with the exception of one student who indicated a span extending from the first year in school. Special instruction included years at Oakley Centre. Students of the OC group in grade nine indicated that they had been enrolled in the school from one to four years - slightly more than one-half were in their fourth year at the school with an additional one-third (approx.) in their third year. Seven students (15%) of the R group indicated they had previously attended Oakley Centre for a period extending from one-half of a year to two years.

Descriptions of students' gifts/talents (obtained from the students and their teachers in grade nine) involved a range of attributes. These included all-round abilities, aptitudes in particular subject areas (e.g., math, science, computing, humanities, languages, and fine arts), and various skills/abilities (e.g., verbal, writing, comprehension, memory, reasoning, spatial, mechanical, creative, athletic, leadership). Most frequently mentioned were all-round abilities; approximately one-half of the students in each of the groups were judged to be capable in all or most respects. Other areas identified with some frequency particularly by students were aptitudes in math and/or humanities. Particular strengths indicated with some frequency by teachers included students' comprehension or ease of learning, task commitment, and self-motivation.

A sizable minority of students (15% OC and 24% R) and their teachers (approximately one-third of each group) did not indicate any areas of weakness. Weaknesses identified amongst the remainder of the students encompassed aptitudes in particular subject areas, various skills and abilities, and approach to learning. Those mentioned most frequently by the students were their aptitudes in science (28% OC and 18% R), math (24% OC and 13% R), and French (i.e., 24% OC), and also work/study habits (11% OC and 16% R). Those mentioned most frequently by teachers were weaknesses with respect to students' study/work habits (20% OC and 27% R), concentration (i.e., 17% OC), and self-discipline (i.e., 20% OC). One OC student and six R students were labelled underachievers by their teachers.

B. DIRECTIONS TAKEN BY THE STUDENTS OVER THE COURSE OF THE STUDY

The following presents an outline of the direction taken by the students from grade nine through to the post-graduation year. Included are the choices that students made with respect to the high schools attended, programs taken which were of a special nature, involvement in activities in and out of school, and the path followed after graduation. Also presented are the students' successes with respect to the recognition they received by way of awards, scholarships, and placement in contests or competitions, and the high school diploma awarded in the 1987-88 school year, the "on-time" graduation year.

High Schools Attended by Students

The percentage of the students who continued to attend CBE schools declined from Years 1 to 4 of the study. Of the original 91 students who began the study in their grade nine, 89% remained in CBE schools in the 1985-86 school year, and 78% in the 1987-88 school year. A small percentage (5%) also continued in CBE schools in the final year of the study (1988-89), the post-graduate year for the main body of the students.

Thirteen high schools were attended by students who remained within the CBE system in their senior years. A relatively large percentage of the students (44% OC and 29% R) chose to attend Western Canada in their grade 10 year. The numbers attending other CBE high schools in their grade 10 year ranged from 1 to 9 in total. Of those remaining in CBE schools in the latter high school grades, a small number - three - had transferred to other schools within the system. Two switched to high schools which offered a special program (IB and PACE), whereas the third had switched to a neighbourhood school after dropping the IB program at Western Canada.

With regard to those who left the CBE system,

- seven (8% of the original 91 students) had elected to attend Bishop Carroll in their grade 10 year. Of these students, four remained in Bishop Carroll to complete their high school, one moved from the city after grade 10, one transferred to a CBE high school to complete grades 11 and 12, and one transferred back and forth between Bishop Carroll and Western Canada before settling in a private school in the city to complete grades 11 and 12.
- four dropped out of school. One of these subsequently returned to

school after a two year absence to complete grade 11 and 12 at Bishop Carroll.

- one received an Alberta Heritage Scholarship to attend a private school in the USA which offered a full IB program.
- ten students (11% of the original 91 students) moved from Calgary and did not return during the subsequent course of the study. One other student who had moved after grade nine returned to the city to complete grades 11 and 12 in a CBE school.

Special Programs Taken by Students

Extensive programming of a special nature was experienced by the OC group in grade nine. This group indicated that Oakley Centre provided an individualized, enrichment program tailored to suit the needs of the gifted student. Regular students'' experiences, in contrast, were more varied. According to their reports, approximately 40% had not been involved in any special programming in grade nine, 22% had engaged in some type of enrichment activity or program, 16% were enrolled in French Immersion or a bilingual program, and 9% had been in PEP (Personalized Education Program). A small number received extra attention through field trips (3), discussion sessions with gifted students to review high school opportunities (2), and group counselling (1).

In high school years, a larger percent of OC students engaged in programs or activities of a special nature than did R students. Of those who continued on in CBE high schools in grades 10 and 12, 65% (approx.) of the OC group compared to 50% (approx.) of the R group enrolled in such programs as Honours, IB, Independent Studies, STRETCH, PEP, PACE, PACT, Challenge, Bilingual program, and U of C enrichment or extension programs in science and math. Overall, the Honours/IB program moreso than other special programs had attracted a larger number of students in both of the groups (approx. 20% to 30% of the R students and 30% to 40% of the OC students in grades 10 and 12).

A number of students who left the CBE system had enrolled in special programs or schools. In addition to those who conducted independent studies at Bishop Carroll, one other student (R) who attended school in Calgary, a private school, also received opportunities of a special nature; this student crewed a tall ship from the Orient to Europe as part of the school program. Students who left Calgary and who enrolled in special programs/schools included two students (2 OC) who continued

in IB in the U.S.A., one student (R) who had taken an enrichment program for the gifted in an Ontario high school, and one student (OC) who attended a private (French) school in Quebec. One other student (OC), a student with whom contact had been lost following the end of grade nine, had indicated plans to enroll in a program for the gifted in a British Columbia school.

Student Engagement In Various Activities

Relatively large percentages of the two groups of students were active in various pursuits in and out of school:

- Approximately 60% of each of the groups indicated pursuit of out-of-school studies in grade nine, 50% in grade 10, and slightly less than 50% in grades 11 and 12. Out-of-school studies most frequently mentioned were in the performing arts and athletic fields. Other fields mentioned included the visual arts, academics (e.g., math, science, languages), computers, electronics, accounting, air cadets, aeronautics, driving, First Aid, CPR, and leadership.

- A majority of students within each group in grade nine (from 55% to 65% approx.) and in high school years (close to 75%) indicated moderate to extensive involvement in extracurricular activities in their schools. Most of the remainder indicated "a little" involvement.

  The students participated in a variety of activities. A large percentage indicated taking part in sports both at the grade nine level (from 60% to 70%) and in high school (approx. 55%). Other types of activities indicated by the students included involvement in fine arts pursuits, councils and committees, conferences and seminars, clubs, the school newspaper, contests or competitions, various types of projects, field trips, public speaking, peer support groups, volunteer organizations, and social activities in the school.

- A relatively large percent of both groups - 54% OC and 65% R - indicated they had held leadership or executive positions in in-school or out-of-school activities or organizations during their high school years. The activities or organizations included various school councils and committees, seminar groups, the school newspaper, the yearbook, clubs, sports, music groups, political or

business organizations for the youth, church organizations for the youth, and charity drives. One student indicated that he was the president of his own investment company.

Recognition Received: Awards, Scholarships, Placing in Contests and Competitions

The majority of students in both groups (74% OC and 81% R) indicated they had received some form of recognition for their skills and abilities in their high school years. These included scholarships; academic awards; prizes or top standing in contests or competitions; awards in athletics; and awards in service, public speaking, or leadership areas. Distinctions mentioned most frequently by the students were their receiving the Rutherford Scholarship, the Honour Award/Certificate, an achievement award in one or more subject areas, and placement in math contests.

On-Time Graduation

The 1987-88 school year was the "on-time" graduation year for the students. In this year, of the 91 students who began the study:

- 80% had graduated (85% OC and 75% R)
- 2% left grade twelve without a diploma (2 R)
- 8% were still working towards a diploma (4 OC and 3 R)
- 4% had dropped out of school (1 OC and 3 R).

The status of 5% was unknown (2 OC and 3 R).

Of the students attending CBE schools (71), 66 (93%) were awarded a high school diploma in the "on-time" graduation year. Of those who were awarded a diploma:

- the majority (60% OC and 68% R) received the advanced diploma with the Award of Excellence
- 31% OC and 23% R, an advanced diploma
- the remainder (9% OC and 10% R), a general diploma.

Of the five students who did not receive a diploma in the "on-time" graduation year, two were in grade 11 at this point in time, and three did not qualify for a diploma in their grade 12 year. In this latter regard, two students had two or three credits less than the 100 required for a diploma and one had not completed the required credits in social sciences. One of these students returned for a fourth year in high school to fulfill the requirements for a general diploma.

Of the students attending non-CBE schools,

- three of the four at Bishop Carroll were awarded a diploma in the "on-time" graduation year (two received a general whereas the third received an advanced diploma with the award of excellence). The fourth had not acquired the necessary credits for graduation. Three of the students returned for a fourth year in high school: two to upgrade their general to an advanced diploma and the third to acquire the credits needed for a general diploma.
- two students attending private schools, one in Calgary and one in the USA, had not graduated in the "on-time" year. The student in Calgary was in grade 11 at this point in time and the student in the USA had yet to complete grade 13.
- updated information was available on the status of 5 of the 10 students who had moved away. Four had graduated "on-time" and the fifth returned for a fourth year in high school to obtain the credits needed for graduation.

School records for CBE students in grade 12 in the 1987-88 year also indicated that the two groups, on average, had accumulated more than the required number of credits needed for graduation and that their average marks were high. With respect to the credits, mean values for the groups were 117 (OC) and 115 (R); the range for the OC group was from 100 to 143 and for the R group, 98 to 136. With respect to average marks, the mean value for both groups was 79%; the range extended from 64% to 88% for the OC group and from 60% to 94% for the R group. No significant differences were obtained between the two groups on the two measures.

Post-Graduation Year

Information obtained in the post-graduation year indicated that the majority of the high school graduates (79% in each group) went on to full time post-secondary studies following their grade 12 year. Of the remainder of high school graduates:

- 4 (3 OC and 1 R) returned for a fourth year in high school
- 6 (4 OC and 2 R) went to work full time
- 2 (2 R) became exchange students
- 1 (1 R) took the opportunity to travel, work, and study overseas.

The occupation of 2 (1 OC and 1 R) were unknown.

Of the four graduates who returned for a fourth year, three wanted to upgrade their diploma from a general to an advanced, and one wanted to upgrade his marks in order to increase his chances for receiving scho-

larships. (In addition to the graduates, three others - 2 OC and 1 R - had returned for a second year in grade 12, in these cases, to fulfill the requirements for a general diploma.)

Of the graduates from Calgary who were not fourth year high school students (and from whom questionnaires were received in 1989),

- a large percentage (73% OC and 62% R) indicated that they had received scholarhips or bursaries on or since their graduation,
- a minority (20% OC and 38% R) indicated receiving awards or winning contests or competitions in the same time period, and
- a minority (approx. 30% in each group) indicated holding a leadership position since leaving school.

All but a few of those who were awarded scholarships/bursaries indicated that they had received the Rutherford Scholarship. A variety of other scholarships and bursaries were also indicated; these included awards presented by various levels of government, universities, CBE, oil companies, professional and service organizations, and clubs. Other distinctions received with respect to awards and winnings in contests/competitions included awards received on graduation from high school in academic, leadership, and athletic areas; winnings in class competitions and elections conducted at university, and winnings in sports competitions at the university, city, and provincial levels. Leadership positions described by the post-graduates involved roles in various university student organizations (Student Union; class, residence, undergraduate societies or associations), air cadets, church youth groups, political youth groups, volunteer groups, and sports.

Information obtained from those attending post-secondary institutions indicated the following situational circumstances:

- With the exception of three students who attended a college or technical institution, all attended universities in the post-high school year. The majority attended post-secondary institutions in Alberta (71%), namely in Calgary (60%). A sizable percentage (20%) attended universities in Central Canada. A small percentage were in universities in B.C. (7%) and the Maritimes (2%).

- The majority (about 60%) continued to live in the family home in the post-graduation year. A sizable number (26% OC and 37% R) were living in residence at universities. Of the remainder (6), one split his time between his family home and residence and two were living on their own; no information was available on the other three.

- A large proportion (close to one-half) were registered in General Studies. Also of some size was the proportion (close to one-quarter) in engineering. The remainder were in a range of programs which included the sciences, fine arts, business, and political science fields. One individual indicated an intention to switch to music from Russian history. One who had attended a bible college intended to enter university the following year to pursue a medical career.

- Around 43% of each group indicated that they had applied to more than one institution. Of these students, three-quarters (18 of 24) indicated that they were accepted by the universities of their choice. The reasons indicated by those who did not gain entry into favoured universities were varied: too low marks, failure of the entrance exam, failure to meet deadlines for sending marks, inaccurate transcripts sent by Alberta Education, and biased selection processes which favoured local above out-of-province students.

- Approximately one-third of each group indicated holding a job in addition to conducting studies. The jobs included work as a waitress, dishwasher, clerk, cashier, receptionist, labourer, usher, sales and repairman in electronics or sports equipment, bookkeeper, marketing assistant, swim coach, computer consultant, T-shirt designer and manufacturer, and an assistant in conducting a political survey. One student indicated full time employment for four months as part of the co-op program in which he took part at the University of Waterloo.

High school graduates who did not go on to post-secondary studies following grade 12 also held a variety of jobs. Those that went to full time employment worked in shoe stores, grocery stores, mailrooms, resort hotels, construction, and sales promotion; also some functioned as a cashier, receptionist, marketing assistant, and delivery boy. Two of the three who lived abroad also worked: one had a position as an au-paire girl in Paris and also instructed a school girl in English, a second who was an exchange student in Caracas taught English to individuals or small groups of adults. Three of the four who returned for a fourth year in high school also held jobs: one had played a major role in a movie filmed in Calgary and also was a vocalist in a band. A second worked as a waitress and the third as a courier.

Future plans formulated with respect to careers and post-secondary studies were the following:

- With respect to post-secondary students, all but four (2 OC and 2 R) indicated that they had chosen a field in which they intended to major. Approximately one-half of these students indicated plans to major in a science related field. The remainder expressed interests in majoring in such fields as business/commerce, law, political science, humanities, education, psychology, and fine arts.

  A large percent of the post-secondary students (72%) indicated they planned to continue their studies until they received their degree(s), 17% indicated they planned to take a time-out period, and 11% were uncertain as to the route they would take. A larger percent of the R group compared to the OC group (25% versus 12%) planned a time-out period.

  The following was indicated by the nine students who planned a time-out period in their post-secondary studies.
  - Three students who did poorly in their first year were not returning in the Fall but planned an eventual return to full time studies after taking time out to work and take refresher courses on a part-time basis, to go on an overseas tour with the army, and to clarify career goals and the direction to take to achieve these goals.
  - Four students planned to take time out during undergraduate years. One wanted to go on a Morman mission, two wished to study and travel overseas, and one wished to travel and also to train for the upcoming Olympics. Two others planned to either work or travel between undergraduate and graduate degrees.

- Of the graduates who were engaged in activities other than conducting post-secondary studies, only one did not have a specific interest in pursuing this avenue in the future. This individual, a fourth year student, planned a professional career in singing and acting. The remainder intended to pursue studies at the post-secondary level at some point in their future:

  - Six of the nine graduates who had spent the post-high school year either working full time or engaged in various pursuits overseas reported intentions of going to university in the Fall of 1989. Two anticipated going to university sometime in the future, but had not made any definite entry plans. Two had not defined their career goals, whereas the remainder indicated interests in pursu-

ing degrees in law, engineering, architecture, industrial design, and drama. No information was available on the remaining graduate.

- One individual who left grade 12 without a diploma expressed an interest in pursuing a degree either in humanities, philosophy, or psychology. The plans were tentative at this stage of his life and did not appear closely related to his primary ambition of being a musician.

- Two graduates who returned for a fourth year indicated plans to enter university in the Fall of 1989, whereas a third was taking time out to go on a Morman mission prior to engaging in post-secondary studies. Indicated career interests of these three students were in the fields of communications, political science or law, and computing science.

- Of the eight students working toward a high school diploma in the 1988-89 school year (i.e., those behind a grade, in private school, or who returned for a second grade 12 year to acquire a general diploma):
  - four indicated plans to enter a post-secondary institution in the Fall of 1989. Three anticipated entry into university and one planned to go to SAIT if not accepted at U of C. Career interests included degrees in liberal arts, the math/science area, and engineering or metallurgy. One student expressed an interest in a career in writing or photography, and possibly law at a future date.
  - two indicated plans to work for a time to finance their post-secondary studies. One ultimately planned to go to college first and then transfer to a university: career interests were in the science field. The second planned to go to SAIT, and with upgrading, on to university some time in the future: career interests lay in the computing science field.
  - the remaining two students (one of whom had dropped out of school for two years) planned to complete more high school courses to gain the qualifications needed for an advanced high school diploma. In the next year, one planned to enter university and expressed interest in an engineering or business degree. The second had interests in going to either the Alberta College of Art or Ryerson in Ontario.

- One of the drop-outs did not have any interest in pursuing her education; she intended to set up a fashion design studio in the near future. A second drop-out had acquired a high school equivalency diploma, and intended to pursue post-secondary studies, first as a part-time student in a college and later, as a full-time student in university. His interests primarily were in writing, but he also had talents in music and drama which he wanted to expand. No information was available on the remaining drop-out.

C. ASSESSMENT OF SCHOOLS, COURSES, PROGRAMS, AND STUDENT PROGRESS

1. Selection of High schools: Decision-Making and Fulfillment of Expectations

Junior high graduates who remained in the city enrolled in 14 high schools for their grade 10 year. Thirteen of the high schools were within the CBE system and one within the Catholic Board of Education system. About one-third of all the students chose to attend Western Canada High school. The numbers who attended other schools ranged from one to nine.

With respect to the selection of high schools:

- A majority (91%) of students in both groups indicated that the high schools in which they registered in grade 10 were their first choice. Those who indicated otherwise reported that their first choices were Western Canada or Sir Winston Churchill which offered the IB program, or Bishop Carroll which offered an independent study program. Reasons why these students did not enroll in preferred schools involved such factors as the students' non-acceptance into the IB program, the distance of the school from home, friends' attendance in the local school, and attractive opportunities offered by other schools (e.g., good band or sports program, options in such areas electronics, aeroscience). One parent added that compulsory religious studies at Bishop Carroll was the factor which dissuaded the student from enrolling in this school.

- A larger percent of OC students (84%) than R students (50%) reported that they (and their parents) investigated the potential of various high schools in the city prior to selecting the school which ultimately was attended.

- A number of features appeared to be relatively important considerations in the decision to select a particular school. Those which tended to be of moderate to major importance to a large number students (50% and more of the total number of students) included: the distance of the school from home; their friends' attendance at the school; the quality of the academic programs offered at the school; the opportunities available to students in the school with respect to special programs and variety of options; the school atmosphere; and the school's reputation with respect to its standards of teaching and preparation of its students for higher level education. In addition to many of the features identified by students, parents also indicated that the school's reputation in regard to discipline, the structure provided in course work, student-teacher rapport, communication/consultation of the school with parents, and the school's recognition of the special needs of gifted students were of importance in the decision to select a particular school.

  In the selection process, some school features were of greater importance to one group than the other. Significant differences were obtained between the two groups' ratings of friends' attendance and special programs at the school; friends' attendance was more important to R students whereas the opportunity to take special programs was more important to OC students. Parent ratings also indicated that the quality of the fine arts program offered in the school was of greater importance to the OC group than the R group.

The majority of the students (67% R and 72% OC) and parents (62% R and 83% OC) at the conclusion of grade 10 indicated that the selected high school met some if not all of their expectations.

- Ways in which expectations were met included positive experiences with respect to aspects of course work, program opportunities, extracurricular activities, the approach of teachers, the school atmosphere, peer relations, student progress, and school facilities. Also mentioned, particularly by students, was their encounter of expected changes (i.e., increases) in such areas as work load, competition amongst students, and the need for self-responsibility.

- Areas in which student and parent expectations were not (entirely) met primarily involved disappointments or difficulties encountered with respect to course work/programs, teachers, and the school

atmosphere. Some students found that course work in instances was too easy, slow-paced, and unstimulating, whereas others found converse circumstances. Programs were found lacking in terms of emphases taken, degree of flexibility allowed, and range of opportunities available to students (e.g., in independent studies, the variety of options). Teachers were found lacking in respect to their level of expertise, and their approach to teaching and students. School spirit was considered low by some students, and relations amongst the students, poor.

2. Courses Taken in High School and Marks Achieved

Information obtained from 1987-88 transcripts of grade 12 CBE students indicated the following:

- Almost all (i.e., from 93% to 99%) of the grade 12 students had taken courses at the 10, 20, and 30 levels in English, social studies, math, and chemistry. Approximately two-thirds had taken biology and physics at the 10, 20, and 30 levels. The marks ranged from 50% to 100%. Mean percentages were generally high, ranging from the mid 70's to mid 80's. (Note: The highest marks achieved in repeat courses were included in calculations.)

- Over high school years, 17% of the OC group and 30% of the R group (close to one-quarter of the total number of students) had repeated from one to three courses in the core academic areas. Repeated most frequently was math. Math repeats constituted 36% of the core courses retaken by the total number of students, 45% of that retaken by the OC group, and 29% of that retaken by the R group.

There appeared to be several reasons why courses were repeated. One-half (8) of the students who repeated courses had passed the first time; three of the students (1 OC and 2 R) were required to repeat (two) courses because of having transferred either into or out of the IB program, and five (2 OC and 3 R) apparently repeated their courses in an attempt to raise their marks. Of the remainder of the students (8), seven (3 OC and 4 R) repeated courses because they failed the first time, and one (1 R) apparently repeated one course to pass and repeated two more in order to raise marks.

Nature of the problems encountered in failed courses varied amongst the students. One student indicated that his poor performance was due to an

extended illness and missing much of the material during his absence. Other students indicated either poor skills in the subject areas or little motivation to do the work (boring material, little encouragement provided by the teachers). Some of the students indicated they did not attempt to repeat the failed courses in the academic stream; they opted to take the non-academic route in the subject areas (i.e., in math and English).

Six students (5 OC and 1 R) skipped course levels in their high school years. Three of the students indicated that the course was in a core academic subject area (i.e., math 10); the remainder were in the second language areas, and in computer processing and music.

Analyses conducted on the students' marks indicated no differences between the groups in any of the core academic subject areas across levels 10, 20, and 30. Differences, however, were found between the course levels in social studies and math. In this regard, findings indicated that, on average, the students' level of achievement in these two subjects increased at the 30 level relative to the earlier levels. The change in marks at the 30 level, although statistically significant, was quite small (a rise of few percentage points). Overall, other than for minor variations, the marks of the two groups of students in core academic courses, on average, were high and stable across the 10, 20, and 30 levels.

Other academic courses taken by a sizable number of students included those in the IB program, math 31, and second languages:

- The transcripts indicated that a total of 15 students (9 OC and 6 R) had taken courses officially recognized by Alberta Education as IB (i.e., in English, chemistry, biology, physics, and Theory of Knowledge). The marks in IB courses were in the 80's and 90's with the exception of one in the high 70's. Three of the students had taken a full IB program.

- Two-thirds of the students had taken math 31. A larger percent (72%) of OC students than R students (61%) chose to take this course. Average marks tended to be high for both groups (from 76% to 79%).

- Three-quarters of the students in each of the groups had taken at least one second language course in their high school years. Four students (R) had been in the bilingual program. Seven students (OC)

had taken instruction in a language other than French (i.e., Latin, Spanish, or German). Level of achievement in second language courses ranged from mid 50's to high 90's. One student who had failed a lower level French course had received a passing mark on the repeat of the course.

As required, all students had taken physical education 10. Approximately 33% of each of the groups continued to take physical education at the 20 level, and approximately 15% of each of the groups at the 30 level. Mean achievement for the two groups extended from 76% to 81%.

Options and electives taken by the students in high school and their achievement in the courses were the following:

- Close to two-thirds of the students (58% OC and 70% R) had taken at least one business education course in the following areas: computer processing, typing, accounting, law, basic business, business education, record-keeping, and marketing. A sizable percentage of each of the groups had taken computer processing 10 (31% OC and 45% R) and typing 10 (53% OC and 61% R); small numbers had taken courses in the remainder of the indicated subject areas. Generally, few students in each of the groups continued beyond lower level courses in this area of study.

  Marks in business education courses ranged from 45% to 100%. In courses taken by more than one student, mean values ranged from high 60's to mid 80's.

- Close to one-half of the students in each of the groups had taken at least one practical arts course in their high school years. These included: electricity, electronics, mechanics, machine shop, welding, piping, building construction, communications, visual communications, drafting, graphic arts, performing arts, food studies, clothing and textiles, personal living skills, and health and personal development. Small numbers of students (up to nine) had taken any one course in these subject areas. Marks ranged from the 31% to 100%. In courses taken by more than one student, mean values generally ranged from low 60's to mid 80's. Two students did not pass courses taken in drafting and communications.

- Small numbers of students had taken courses in the fine arts field in high school. From 13% to 17% of the total number of students had

taken from one to six courses in music, and from one to three courses in drama and art. More of the OC group (22%) than the R group (9%) took at least one course in drama. The percentages in each of the groups who took art and music were approximately equal. Marks ranged from the mid 50's to 100%.

- Approximately one-quarter of the students (19% OC and 33% R) had conducted from one to four special projects in their high school years. Marks ranged from the 50's to the 90's.

- Close to one-quarter of the students in each of the groups had taken one or more electives. These included world history, comparative government, philosophy of man, micro/macro economics, cultural and physical anthropology, general/applied sociology, general/personal psychology, and experimental psychology. Marks ranged from high 50's to low 90's. One of the students had repeated general psychology to raise his marks from a fail to a pass.

- Other courses taken by students were aeroscience (1 OC) and driver and safety education (6 OC and 3 R). The students generally did well in these fields.

3. Teacher Ratings of Student Progress

Various aspects of students' course work were assessed by teachers. At the grade nine level, these included teachers' ratings of the students' general academic progress relative to their potential and relative to other students. At the senior high level (i.e., grades 10 and 12), these included: students' level of achievement relative to the average student in the subject area taught by the teacher and relative to the perceived potential of the students, the foundation of knowledge and skills acquired by the students in earlier years, the ease/difficulty of course work for the students, and remedial assistance provided to the students.

Information obtained from teachers in grade nine indicated the following:

- Most of the R students (approx. two-thirds) were above average when compared to other students and were doing well relative to their potential. A small number were considered average (7%) or below average (16%). Close to one-quarter of the students, however, could

have done better in their studies according to their teachers. No ratings were given for the remainder of R students.

- No ratings were provided for three-quarters of the OC group; the teachers felt that the special nature of the program offered at Oakley Centre made it impossible to judge the students in "general" terms. Ratings of the remainder of the OC students were high.

Teacher ratings of students' performance in grades 10 and 12 indicated the following:

- Assessments of teachers instructing the students in core academic subjects (i.e., English, social studies, math, and the sciences) in grades 10 and 12 tended to be primarily positive.
  - The majority of teachers (from 60% to 80% approx.) in each of the core subjects indicated that the students' level of achievement was higher than that of the average student; the remainder, with the exception of a small percentage (up to 15%), indicated a level of performance comparable to the average student.
  - From one-third to three-quarters (approx.) of the teachers across the core subjects indicated that the students' foundation of knowledge and skills was advanced; most of the remainder indicated an adequate background in the core subjects.
  - The majority indicated that the level of difficulty of course work appeared either appropriate for the students or too easy; a minority (up to 20% in math and the sciences) indicated the students appeared to find the work too difficult.

  A relatively large percent (from 40% to 70% approx.) also indicated that students' achievement appeared comparable to that expected for their ability level. However, most of the remainder, which accounted for a sizable proportion (i.e., approximately from one-quarter up to one-half) felt that the students could have done better. This finding suggests that a segment of the students were not meeting teacher expectations in the core subjects.

A few significant differences were obtained between the teachers' mean ratings of the performance of the two groups in core subject areas. One significant difference was obtained at the grade 10 level: the finding indicated that, on average, achievement in chemistry was lower than expected for the OC students compared to the R students. At the grade 12 level, four significant differences were obtained. These indicated that compared to the R students, OC students, on average, had a less extensive base of knowledge and

skills in English, appeared to find course work in chemistry less easy and work in physics more easy, and had a higher level of achievement in physics relative to the average student in the class. The differences represented relatively minor variations in the two groups' ratings.

- Teacher ratings of students' performance in the remainder of the courses taken in grades 10 and 12, for the most part, followed the same trends evident amongst ratings in core courses. Teacher ratings tended to be primarily positive in the domains examined.

- A small percent of the teachers indicated that students in grade 10 (5% of the total) and grade 12 (10% of the total) received remedial assistance in the subject areas taught. The assistance described by teachers in some instances, appeared to be directed toward helping students overcome difficulties experienced in various subject areas, and in others, it appeared to be directed toward enhancing the learning process for them. Extra help with essay writing and developing writing skills was an area of assistance most frequently mentioned by teachers at the grade 12 level.

4. Student and Parent Ratings of Course Work

Various aspects of their course work in core academic subjects were assessed by students. For the 9, 10, 20, and 30 levels in Language Arts/English, social studies, math, and the sciences, students rated the level of difficulty of the course work, their satisfaction with the assistance received from teachers, their level of achievement with respect to the marks achieved in the courses, and their satisfaction with their level of achievement.

Students' ratings of course work in core academic areas across the 9, 10, 20, and 30 levels indicated the following:

- The majority of students perceived the level of difficulty of academic course work as either appropriate for them or too easy, approximately one-third up to three-quarters indicated an appropriate level of ease/difficulty of course work, and one-third to one-half indicated too easy course work. A small percentage (up to 19%) indicated too difficult course work.

- In most instances, the majority of students expressed satisfaction

with the assistance they received from their teachers, with most of the remainder indicating a "neutral" response. The percent indicating dissatisfaction ranged from 0% to 29%. Courses within which more than 20% of the students indicated dissatisfaction were: social studies, math, chemistry, biology, and physics at the 20 level and physics 30.

- A high percentage (from 70% to 90%) of the students indicated a level of achievement in course work which was above average. Of the remainder, most rated their achievement as average with a small number (up to 19%) indicating below average performance in the core courses.

- Generally, a majority of the students expressed satisfaction with their level of achievement with much of the remainder indicating a "neutral" response. In a number of instances, however, a sizable minority (from 20% to 30% approx.) expressed dissatisfaction; these included dissatisfaction with achievement in English 10, 20, and 30, social studies 20 and 30, math 20 and 30, and chemistry 20.

Reasons indicated by the students who expressed either dissatisfaction or neutral feelings in regard to teacher assistance involved the following problems: unsuitable or poor teaching method, style, or organization; insufficient explanation, review, and course structure provided by teachers; teachers' unawareness that students needed help or teachers' preconception that students could manage the material on their own; unavailability of teachers (e.g., too busy, too large class size); too difficult course work and/or too hard marking; poor student-teacher relations or dislike of the attitudes, personality or approach of the teachers; and reticence or little need of students to go to teachers for help.

Explanations given by students in regard to their dissatisfaction or neutral feelings about their level of achievement in course work involved student, course, and teacher factors.

- Some students indicated that they felt they could have done better had they put more effort into course work. Others, however, indicated that they did not understand the material and did not have sufficient abilities or skills to do well.
- Course work was viewed by some students as boring, too easy or unstimulating, whereas others found the course work too difficult or the workload too heavy. Some also felt that group work or work

conducted within a special program pulled their marks down.

- Teachers were viewed by some students as poor, unhelpful, and unfair. Some also indicated that the courses or teachers did not foster learning and achievement; others indicated that their teachers expected a better performance from them.

Results of analyses conducted on the students' ratings of aspects of core course work indicated a number of significant differences between groups and course levels. These, however, accounted for a small percentage of the variability of the students' ratings and, in practicality, represented minor differences between groups and across time. The trends apparent amongst students' ratings were as follows:

- Students' ratings of difficulty level of math and the sciences tended to follow a pattern. In these subjects, the ratings indicated that OC students, on average, tended to find course work less easy in grade 9 than did R students. In high school, however, the ratings of the two groups either converged or were the converse of that of grade 9, i.e., work was easier for the OC group relative to the R group. Generally, the ratings indicated that the OC students tended to find course work easier in high school relative to grade nine whereas the R group tended to find work in high school less easy than in grade 9.

  Ratings of achievement in math and the sciences also tended to follow a similar pattern. OC students generally indicated a lower level of achievement in grade nine relative to the R group, whereas in high school grades they tended to rate their level of achievement at a higher level than did the R group.

  Student ratings in English and social studies did not follow a clear pattern. Results with respect to English indicated no differences between groups at any of the course levels with respect to difficulty of course work and achievement levels. However, fluctuations in course difficulty/ease were obtained across the course levels: in this regard, the findings indicated that students, on average, found course work less easy at the 10 level compared to grade 9, more easy at the 20 level, and less easy at the 30 level. In social studies, but for minor variations, the ratings indicated that difficulty level of course work and achievement levels remained relatively stable across the course levels and were comparable for the two groups.

- Student ratings of satisfaction with their level of achievement and teacher assistance tended to follow a pattern. Level of satisfaction of both groups tended to gradually decline from the grade 9 level in the core subjects through the 10 and 20 levels, and then recover to some extent at the 30 level. The OC group, in some instances, indicated an overall higher level of satisfaction than did the R group.

Parent mean ratings of son's/daughter's level of achievement generally conformed to those obtained from the students' themselves. Above average achievement was indicated across subject areas and across the course levels. Parents, on average, expressed satisfaction with the achievement attained by their children.

5. School Programs and Student Needs

Students, parents, and teachers assessed various aspects of the programs provided to students. In the following, their views regarding the strengths and weaknesses of programs and how well programs met students' needs are presented.

Special programs

a. Grade 9

Information collected in grade 9 from Oakley Centre students, their parents, and their teachers is as follows:

- Students and teachers indicated that Oakley Centre offered a number of advantages to its students. Mentioned most frequently was the flexible, enrichment nature of programming at the school, according to the respondents' reports, it afforded students the freedom/independence to pursue studies in areas of personal interest and to engage in in-depth or advanced studies. Also mentioned with some frequency was the school atmosphere (i.e., the stimulation and support provided by peers and teachers) and its promotion of student growth in both academic and personal domains.

- A relatively large percent of students (26%) and teachers (41%) felt that the Oakley Centre program had no disadvantageous aspects. Of the program disadvantages indicated by the remainder

of students and teachers, one which was predominant (particularly amongst teachers) was the likelihood that students would encounter difficulties adjusting to high school after engaging in a specialized program such as Oakley Centre. Other disadvantages which appeared of some consequence, particularly to students, concerned bussing problems, limited contact with friends (neighbourhood friends and also OC friends who resided in all parts of the city), and the limited physical education program in the school.

About one-third of the students could not think of any ways in which Oakley Centre could be improved. More frequently mentioned areas of improvement suggested by the remainder concerned the facility and equipment, the organization of the program (e.g., degree of structure/flexibility, requirements, scheduling), and the need to extend the program (e.g., to high school grades, to additional sites in the city). Also mentioned with some frequency was the need to alter the pressures placed upon students (e.g., increase/decrease re: achievement, homework, studying).

Improvements more frequently suggested by teachers concerned the need to optimize individualized programming at the school. In this regard, teachers indicated the need to continue to make curricular adjustments to accommodate the individual needs of the students and to strive to provide an appropriate balance between structured and flexible programming for individual students. Also mentioned with some frequency was the need to provide more opportunities for student growth (i.e., expansion of their interests and abilities).

- Parents indicated a number of positive effects resulting from their children's experiences in the Oakley Centre program. These included such aspects as the advancement of abilities and talents, development of various types of skills, and growth in self-confidence. The program improvements suggested by parents primarily concerned the need to expand the opportunities and support available to the students, i.e., provide more assistance and encouragement to students to help them develop various skills/abilities, and increase the types of resources and programs available to them.

- Students apparently prospered in the Oakley Centre program.

Teacher ratings indicated that the majority (from 76% to 80%) of the students did well relative to their potential and other students. The students were highly appreciative of the program. Almost all indicated that the program had been "good" for them and that they were glad to be enrolled at the school. A large percentage (61%) also indicated they would have liked to continue the program in senior high years if it were available.

Of the students of the R group who were involved in some form of special program or activity in grade 9 (27 out of 45), 10 were engaged in enrichment activities, 7 were in Bilingual/Immersion programs, 4 were in PEP (Personalized Education Program), 3 went on field trips, 2 had taken part in discussion sessions regarding high school opportunities, and 1 had taken part in group counselling. Information collected in grade 9 from the R group (students, teachers, and parents) with respect to special programs and activities is as follows:

- Advantageous aspects of special programs and activities identified by R students and their teachers included students' opportunities to engage in more challenging work, pursue and expand interests, acquire knowledge and new skills, and meet new people and interact with other students who shared interests and intellectual capabilities. Also advantageous was the opportunity to experience a change from regular classroom work (in enrichment, field trips, etc.), and the opportunity to take a flexible, individualized approach to studies (in PEP) and to master the French language (in the Bilingual/Immersion program).

- Disadvantages were also experienced by the students. Those mentioned by students and teachers in regard to enrichment/ special projects and PEP included students' encounter of work load pressures (e.g., maintaining progress both in regular and special work, missing regular class instruction when pulled out for enrichment) and limited programming (e.g., insufficient resources and time allotted to special programs, little choice of topics for projects). In the Bilingual/Immersion program, identified problems areas included aspects of program organization and approach, student difficulties in functioning in a second language, and the consequences of students having to travel to schools outside of their neighbourhood. Tedium and too heterogeneous grouping of participants were aspects mentioned by

those who went on field trips. The individual involved in group counselling indicated that the sessions did not specifically address personal problems. Improvements to special programs/ activities suggested by students and teachers generally concerned the need to address identified problems.

- Parents observed a number of positive effects resulting from their children's involvement in special programs/activities. These included their children's enjoyment of various aspects of these programs/activities, development of new interests and skills, and growth in knowledge. The suggestions for improvement offered by the parents primarily concerned the need to expand the opportunities available to the students, and to provide more encouragement to students to develop their potential.

- Differential views were expressed by students in regard to the merit of their involvement in programs/activities of a special nature. Those involved in enrichment programs/ projects, PEP, and the Bilingual/Immersion programs generally felt their experiences were of greater value to them than did those who took part in field trips, discussion groups, and counselling. Overall, more than one-half (56%) of the students involved in some form of special activity in grade 9 did not wish to continue or were uncertain of the merit of continuing such endeavours in grade 10.

b. High School

A variety of special programs were taken by CBE students in their high school years. Included were:

Programs for high academic achievers
- Honours/IB program at Western Canada High School and Sir Winston Churchill
- Honours program at Central Memorial

Programs which offered an alternative learning approach
- independent study program at Henry Wise Wood
- PEP (Personalized Educational Program) at John G. Diefenbaker
- PACE (Personalized and Continuous Education) at Ernest Manning

Programs which offered enrichment and challenge
- PACT (Program for the Academically and Creatively Talented)

at Dr. E.P. Scarlett
- Challenge at Lord Beaverbrook
- STRETCH (Striving to Reach Excellence Through Challenge) at Crescent Heights
- leadership program offered at Crescent Heights
- gifted and talented program at James Fowler

Bilingual program offered at Western Canada

Programs offered in university
- science enrichment program at U of C
- U of C extension courses in math.

Information obtained from students and parents regarding the relative merits of special programs is as follows:

Programs for High Academic Achievers

- Honours/IB at Western Canada and Sir Winston Churchill

Fourteen OC and 11 R students indicated that they had taken courses in the honours/IB program in one or more high school grades. Benefits received from the program according to these students and their parents included opportunities for students to:
- do interesting work (advanced, challenging, stimulating), conduct broad-based and/or indepth studies, and work at a pace suitable to one's abilities (i.e., at an accelerated pace)
- acquire a superior education and also advanced knowledge and skills in preparation for work at the university level
- develop various academic related skills and grow in the personal domain (e.g., study/work, time management, research skills; self-discipline, setting goals, and self-confidence in expressing one's views)
- establish friendships with students who had common interests
- gain prestige in the school.

Drawbacks of the program, in the main, concerned the heavy workload, the stresses resulting from the demands of the program, and the imposition of the program (time-wise) on students' opportunities to participate in other activities

and to take non-academic courses of interest. A range of other drawbacks were also identified. These concerned such aspects as the difficulty of making the transition from junior high studies to work in the honours program in grade 10, the difficulty of the work and the level of skills and commitment needed to do well, the hard marking scheme in IB, the labelling of the IB students, and inadequacies of the program with respect to its breadth, flexibility, opportunities for creative expression, approach to learning (focus on memorization), and counselling.

The majority of the students felt that the honours/IB program had been worthwhile. Of the 14 OC and 11 R students who had taken courses in the program, 10 OC (71%) and 6 R (55%) indicated that the benefits outweighed the drawbacks. Two others also tended to find some merit in the program: one (OC) felt that the benefits equalled the drawbacks, whereas the second (R) felt the benefits equalled the drawbacks with respect to the IB program but the converse was the case with respect to the honours component.

Seven OC and 8 R students indicated they had discontinued one or more honours/IB courses in their high school years. Reasons for dropping these courses mentioned most frequently by students concerned the difficulty and demands of IB studies, and students' desire to reallocate their time to other pursuits. Other reasons mentioned by students included missing the deadline for application into the program, discontinuation of subjects which were not areas of strength, dissatisfaction with the extent to which creativity was fostered in English, insufficient commitment to the program and doing well in it, the expectation of receiving higher marks in the regular program, and the perception of no particular future benefits arising from having taken the IB program in school.

- Honours at Central Memorial

Two students indicated they had taken the honours program at Central Memorial. The benefits described by the students and their parents included the opportunity to work at an accelerated pace and to explore areas beyond of the regular

curriculum, the stimulation of competing with intellectual peers, and the self-responsibility fostered by the program. The drawbacks indicated by the respondents suggested that an optimum balance had not been attained in the program; the students felt that, on occasion, not enough time was spent on the basics, the expanded curriculum included areas which were not considered useful, and students were too competitive. Both students felt the the benefits of the program outweighed the drawbacks.

Programs which offered an alternative learning approach

- Independent studies at Henry Wise Wood

Five OC and 4 R students indicated they had taken courses in the independent studies program offered at Henry Wise Wood. Benefits indicated by the students and parents were the opportunities the program afforded with respect to individualized pacing, choices of topics for projects, pursuit of studies in personal interest areas when ahead of others, class attendance dependent upon students' need for teacher direction, and an expanded curriculum. Also of benefit were students' appreciation of an alternative to regular classroom instruction, and the promotion of students' self-responsibility for their own learning, time management skills, and other skills/attitudes which prepared them for studies at the post-secondary level. Drawbacks of the program indicated by the respondents were its disorganization, difficulties in timetabling IS and regular courses in grade 10, restrictions imposed by teachers on the degree to which students were allowed to work independently, requirements for (some) group work and consequent marking based on group rather than individual efforts, little scope for original work, and a marking scheme in which students in independent studies were judged on a different (i.e., higher) standard than those in the regular program. Other drawbacks mentioned were the difficulties students encountered in making the transition from junior high to independent studies in grade 10, managing their time effectively, and associating with others in the program who were not academically inclined or motivated.

All but two students (1 OC and 1 R) felt that the benefits of the program outweighed the drawbacks. Of the two students,

one did not offer an opinion, and the second provided separate ratings for courses taken within the program; the ratings ranged from a positive to negative weighting of the balance between the advantages and disadvantages.

Two students (1 OC and 1 R) indicated they discontinued one or more courses taken in the independent studies program. One of these students indicated that he switched to the regular program as he preferred the teacher in this program to that in independent studies. The second switched to the regular program in order to achieve higher marks.

- PEP at John G. Diefenbaker and PACE at Ernest Manning

Views expressed by the students in PEP (2) and PACE (3) and their parents regarding the positives and negatives of the two programs appeared similar. Benefits arising from the programs indicated the respondents were the opportunities for students to work at pace suitable to their ability level and to develop self-responsibility and independence (which were considered good preparation for post-secondary studies). The drawback indicated particularly by the students was the unsuitability of the program for who were not self-motivated, required close monitoring from teachers, had difficulty in managing time effectively, and were distracted by a number of interests competing with academics. Also mentioned as a drawback was the restriction of the degree of independence allowed in self-pacing.

Of the two students who indicated they had taken the PEP program at John G. Diefenbaker, one felt that the benefits of the program outweighed the drawbacks, whereas the second indicated the converse. All three students who indicated they were in the PACE program felt that the drawbacks of the program outweighed the benefits.

One of the students indicated that he had discontinued the PEP program in some subject areas. Reasons stated by the student for switching was that he did not get along with the PEP teachers instructing in these areas.

Programs which offered enrichment and challenge

- STRETCH and the leadership program at Crescent Heights

  Six students (3 OC and 3 R) indicated they had taken the STRETCH program. The benefits reported by the students and their parents were the opportunities the program afforded with respect to learning about oneself and about human nature in general, pursuing studies in interest areas, expressing one's creative abilities, and interacting with and learning from others participating in the program. Also, the program facilitated the transition from the Oakley Centre program to high school, and fostered social and intellectual growth. The drawbacks were problems encountered with respect to the time commitment required for the program, the organization of the program (too structured, plans were not brought to fruition, productivity varied from class to class), class size (classes were most effective when less than 10 students were enrolled), and the labelling of students as an elite group. Of the six students, three indicated that the benefits outweighted the drawbacks of the program, two indicated the converse, and one did not offer an opinion.

  Two students indicated they had discontinued STRETCH. One had transferred out of Crescent Heights and the second indicated that the work load was too heavy to continue in the program.

  The leadership program was taken by one student. The benefits resulting from the program indicated by the student and his parents was the enhancement of his communication and leadership skills, and his personal growth with respect to self-understanding and effective management of his personal life. The drawbacks of the program, according to the student, were that no credits were assigned to the course and eligibility was restricted to those nominated by teachers. The student thought the course was worthwhile, and wished that it had extended beyond one level.

- PACT at E.P. Scarlett

  Two students (R) indicated that they had taken the program. The benefits of the program, according to the students and

their parents, included the cognitive stimulation it provided, and its promotion of various skills (use of the library, organizational skills) and personal growth (learning about oneself, gaining confidence in public speaking and conducting large scale research). Drawbacks were the disorganization of the program (lack of direction, clearly stated objectives), and the pressures resulting from the work load, time commitment required of students, and pull-out from regular classes. The two students expressed divergent views with respect to the balance between the program's positive and negative aspects at the grade 10 level: one felt that the benefits outweighted the drawbacks and the second felt the converse was the case. One of the students also had taken PACT 11, and rated the program positively at this level.

The two students indicated that they had not continued to take PACT beyond the grade 10 or grade 11 level. Reasons indicated by the students included views that the program was too time consuming, unproductive, and not advantageous with respect to helping students get into university.

- Challenge at Lord Beaverbrook

  One student had taken the program. The benefit according to the student and his parents, was the creation of friendships with classmates which lasted over the years. The drawbacks were that the program was somewhat disorganized and also not particularly interesting to the student. The student felt that the benefits equalled the drawbacks. He, however, did not continue the program in subsequent grades as he felt it was not a productive use of his time.

- Gifted and talented program at James Fowler

  One student indicated involvement in a newly developed program for the gifted at James Fowler. The benefits the student gained from the program was the opportunity to pursue interests and also to improve his work/study habits. A drawback of the program was its rigid structure (i.e., too much teacher control of projects). The student felt that the benefits received from the program outweighed the drawback.

Bilingual Program

- Bilingual program at Western Canada

  Four students indicated they had taken the bilingual program in high school. The benefits the program offered, according to the students and parents, included the opportunity for students to gain mastery in French (which would be advantageous to getting a job in the future), a facility in learning languages in general, and an understanding of the French culture and the English-French conflict in Canada. Drawbacks were the time commitment required for bilingual studies, the sense of isolation from the rest of the school, and the lack of proficiency in some aspects of the English language (i.e., spelling). All four students felt that the benefits gained from the program outweighed the drawbacks.

  One of the students indicated that she had dropped out of the bilingual program in grade 12. Reasons stated for switching to the regular program was the desire to elevate marks to ensure acceptance into university.

Programs offered in university

- U of C programs

  Four students (2 OC and 2 R) indicated they had participated in the U of C science enrichment program and two (1 OC and 1 R) had participated in the U of C math extension program. Benefits indicated by the students and parents were student enjoyment of a new experience, gains with respect to problem-solving skills and lab experience, exposure to the campus and instructional approach taken in university, and familiarization with the medical research profession and what a career in this area would entail. Only one student experienced disadvantages: the drawback was the extra time invested in U of C studies and its impact on meeting commitments in other areas. All of the students taking part in U of C programs felt that the benefits far outweighed the drawbacks.

Students who had not taken a special program in any of their high school years were asked to indicate reasons why studies of this

nature were not pursued. Reasons stated by 21% of the students (8 OC and 6 R) were varied. Those which were stated with some frequency were the following:

- special programs were not offered in their schools or their existence unknown
- no time/space was available to timetable special programs
- no time was available nor interest to take special programs (students were involved in sports, out-of-school activities, social activities, or enjoying school life)
- few benefits were perceived from taking special programs or incentives offered to students to take them (the programs were just extra work; activities were uninteresting, did not enhance learning, promote talents, nor offer future advantages)

Other reasons indicated by a few students included students' being denied entry because of scheduling errors or lack of qualifications, and their finding special programs unattractive because of prior negative experiences in similar activities or the desire to avoid being labelled as gifted or different. Overall, only three of the students (2 OC and 1 R) regreted that they had not taken special programs in high school.

Student Needs

In the following, student, parent, and teacher views are presented in regard to how effectively schools addressed students' needs. Included are student and parent assessments of the adequacy of the opportunities provided in grades 9 through 12 to develop students' gifts/talents, teacher assessment of the adequacy with which their program of instruction addressed the needs of the students in grade 10 and grade 12, and the three group's ratings of the extent to which various aspects of programming satisfactorily met students' needs.

Views of students and parents regarding the opportunities provided by schools to develop students' gifts/talents were as follows:

- The percent of the OC group indicating adequacy of opportunities declined from approximately 90% in grade 9 to 70% in grade 10. A reversed trend was evident amongst ratings of the R students and parents: the percent indicating adequacy rose from (approx.) 35% of the students and 45% of the parents in grade 9 to close to 50% of the students and 60% of the parents in grade 10. The percentage of the two groups reporting adequate opportunities in the remainder of

high school grades was fairly comparable to that of grade 10.

Student and parent descriptions of ways in which schools promoted students' gifts/talents and ways in which student needs could have been better met in this regard suggested reasons for the aforementioned trends. Comments indicated that the OC group was highly appreciative of the opportunities which the specialized program at Oakley Centre afforded its students and, to an extent, felt their loss in grade 10. The loss, however, appeared to be ameliorated in part by students' taking special programs in high school; the benefits included additional stimulation and challenge for students to use and expand their abilities and talents, and flexibility to investigate areas of interest. Students of the R group tended to express needs for more enriched and flexible programming in grade 9; as with the OC group, special programming in high school apparently fulfilled some of these needs.

- Students and parents described a number of ways in which high schools promoted students' gifts/talents. Most frequently mentioned were aspects of course work, programs, and activities.
  - According to respondents, course work and programs (i.e., their subject matter, special nature, difficulty level, pace, variety, quality, scope, flexibility, and enrichment opportunities) promoted students' learning, motivation, exploration of various interests, expression of their abilities/talents, and growth in various domains. Participation in extracurricular activities was also considered beneficial in that students had additional avenues in which to explore and display their abilities/talents, and also a chance to broaden their experience base and develop skills/interests in the athletic, social, and leadership realm as well as in academics.

  Other aspects mentioned involved teachers, the learning environment, and the encouragement of student growth on a number of dimensions.
  - Teachers' approach (e.g., competence, enthusiasm, recognition of students' gifts/talents, encouragement and high expectations of students, flexibility and willingness to adapt programs to individual needs) were indicated as factors contributing to students' progress.
  - The learning environment, according to respondents, offered challenges to students to excel, provided various opportunities for students to achieve success in reaching their goals, and provided an atmosphere of encouragement/support for the develop-

ment of gifts/talents.
- Promotion of skills such as study/work skills, independent learning skills, and leadership skills enhanced students' abilities to function effectively in school.

- Improvements suggested by students and parents, in the main, pertained to aspects of programs and course work, teachers' approach, and support of students. Most frequently mentioned was the need for more individualized, flexible, enriched programming; this included needs with respect to opportunities to work at one's own pace, to skip to higher level courses if students' knowlege of the material was advanced, to do independent work, to choose topics of interest for assignments, to explore interest areas in depth, to expand studies beyond the prescribed curriculum, and to engage in field trips or other types of off-campus activities.

  Other improvements related to programs and courses involved their content, emphases taken, and variety available to students:
  - Improvements suggested by respondents with respect to course content included the need to provide more interesting material, new material rather than a repeat of earlier years, more challenging material to stimulate students to strive and grow, comprehensive coverage of subject areas, and more relevant, practical material which would be of use to the student in future endeavours.
  - Problem sources with respect to emphases taken in courses/ programs included views that: too much time was spent on topics which were less important or valuable compared to others; too strong emphasis was placed on academics to the detriment of students' involvement in the arts, sports, or extracurricular activities; too strong emphasis was placed on memory work to the detriment of creative expression and true learning; and too much importance was placed on English and social studies when major interest areas were math and the sciences.
  - With respect to range of courses/programs available to students, respondents indicated that a greater variety, in general, would be of benefit, as well as courses/ programs which focussed on specialized areas in math and science, film-making, cartooning, creative writing, and English literature. Also it was felt an alternative to the IB program was needed for those gifted students who found it rigid and too strongly focussed on academics.

Suggestions in regards to improving teachers and their instructional approach concerned the need for better qualified teachers, more enthusiastic teachers, a lower teacher-student ratio, and the presentation of alternative modes to learning (e.g., more hands-on experiences, opportunities for creative expression, class discussions, and debate). Needs with respect to student support included the provision of more recognition to those with superior talents/abilities, individualized attention or segregated classes to optimize students' development, encouragement of students to excel, and encouragement of students to develop their artistic talents in addition to academic skills.

Other aspects mentioned by students and parents concerned problems evolving from situational constraints, the school atmosphere, and the approach of students. Constraints indicated by the respondents were the workload demands of special programs and diploma requirements; these factors impinged on the time students had to meet commitments in other areas and to take part in other activities of interest to them. Problems with respect to the school atmosphere evolved from such aspects as the large size of school and classes, factors which respondents thought adversely affected the learning environment and also the extent to which students had an opportunity to receive special recognition. Problems with respect to students' approach, mentioned primarily by parents, involved factors which affected students' well-being in school; these included students' disillusionment with classroom instruction (e.g., rote learning, feelings that little of value was learned, and biased treatment of students), avoidance of being labelled as different/gifted, and disinterest and little self-motivation in attaining a high level of achievement. Generally, one or two respondents had identified each of the above problems as areas of concern.

High school teacher views of the adequacy of their program of instruction were as follows:

- The majority of the high school teachers thought that the program of instruction in their subject areas adequately addressed the needs of the students participating in the study. Approximately 80% of all the respondents at the grade 10 level and 90% at the grade 12 level indicated positive ratings with respect to programming adequacy. Within core subject areas, the percentages with positive ratings ranged from 65% to 90% (approx.) at the grade 10 level and from 80%

to 95% (approx.) at the grade 12 level. In the remainder of the courses, generally more than three-quarters of the respondents at both grade levels rated their programs positively. No significant differences between mean ratings for the two groups of students in any subject areas were obtained.

Core subjects in which a sizable minority of teachers indicated inadequacy were math and the sciences. Forty-two percent (42%) of teachers instructing OC students and 28% instructing R students in grade 10 thought the chemistry program did not sufficiently address the needs of these students. From 25% to 30% (approx.) of teachers instructing R students in math in grade 10 and biology in grade 12 felt their programs were not adequate. Comments made in regard to ways in which students' needs could have been better met indicated that, on the whole, teachers in these subject areas felt that more flexible, individualized, and enriched programming would have been advantageous. Also, the facilities and resources (e.g, for labs) appeared somewhat of a problem source in the sciences.

- In open-ended comments, teachers instructing in various subject areas tended to identify similar program features as areas of strength and weakness. In general, aspects which met the students' needs particularly well, according to teachers, were the curriculum itself (e.g., its challenging material, breadth, depth, scope), the opportunities provided to enhance studies in the subject area (e.g., variety of learning modes, group work, individual pursuits, accelerated pacing, choices for research projects, competition, individual assistance, learning from intellectual peers) and the promotion of skill development in various areas (e.g., research, work/study, cognitive, verbal, writing, motor, social, leadership). With respect to aspects of the program which did not address needs to the extent required by students, teachers across subject areas tended to share the view that students would have benefited from the provision of more activities of an enrichment nature and from an approach which offered greater flexibility and individualization.

  Comments of teachers indicated that the extent to which students received additional stimulation depended upon a number of factors. Some teachers indicated that they were unaware that the students who were being assessed were gifted; they felt that had they been informed, they would have planned additional activities to enhance the students' studies. Some, however, indicated that highly

structured programs, a heavy workload, large class sizes, and diverse student abilities within the class prohibited the extent to which teachers could provide enrichment to advanced students, whereas others indicated that students did not take advantage of available opportunities nor demonstrate initiative in approaching teachers to request additional assignments. Yet others indicated that enrichment was not required by some students; according to teachers, these students found work sufficiently demanding, had difficulties due to limited skills/abilities in the subject area, displayed little motivation in course work, or did not consider the subject a priority interest area.

Students rated the sufficiency of programming opportunities they encountered from grades 9 through 12. Aspects which were rated included programming which afforded students a flexible, individualized approach to studies (independent work, flexible timetabling, individualized pacing) and activities which offered students choices, variety, enrichment or some form of extra stimulation (challenging work, advanced work, extra assignments, choice of topics, field work, group projects with similar others, work with teachers expert in interest areas, competition in academics, options in interest areas). Findings of analyses conducted on students' ratings indicated the following:

- The OC group experienced greater change than did the R group. The period of change, as expected, involved the transition from the special Oakley programming of grade 9 to the more general, mainstream programming of grade 10. OC students, on average, indicated a decline from grade 9 to grade 10 in the extent to which they could work on their own (i.e., work independently, at their own pace, and according to their own timetable), had choices with respect to topics of investigation in projects, had freedom to pursue studies in interest areas (i.e., at an advanced level, in the field or off-campus), and also the opportunity to work on projects with peers who were equally capable. Comparatively, the R group, on average, experienced less extensive opportunities of this nature in grade 9 and relatively little change from grade 9 to grade 10. In high school grades, the two groups' ratings of the extensiveness of various programming opportunities they encountered remained relatively stable.

- OC students, on average, indicated that various aspects of programming in grade 9 at Oakley Centre generally accomodated their needs

well. In high school years where they experienced less programming of a flexible, enrichment nature, they tended to feel that more opportunities of this nature would have been of benefit to them. The R group, on average, indicated that they would have profited from more programming of this nature throughout grades 9 through 12.

- The OC group advantage relative to the R group persisted into later grades in a number of areas (e.g., opportunities for independent work, choices with respect to topics for projects, challenging and advanced work, field work in interest areas, working with teachers expert in interest areas, and working on group projects with others of like abilities). The advantage appeared to be a consequence of a larger percentage of OC students compared to R students participating in special programs in high school. Teachers provided support for this explanation: ratings of those instructing in special programs indicated that students in these programs received the benefit of more extensive opportunities of an enrichment, flexible nature compared to those in regular programs.

- Ratings which did not entirely conform to general trends involved students' views of options taken in interest areas, extra assignments done on material presented in class, and competing in academics. Findings indicated that students' opportunities to take options and do extra assignments declined from grade 9 through 12; both groups felt that circumstances with respect to extra assignments were satisfactory whereas for options, they would have liked to have taken more, particularly in high school. Both groups, on average, felt that opportunities to engage in competitive activities (which remained stable over the grades) were satisfactory.

- Comments added by students to explain their ratings generally referred to the reasons why more opportunities would have been of benefit and the problems which hindered the provision of more programming opportunities to students. A benefit projected by students was the stimulation which more flexible, enriched programming would bring to the learning environment; they felt that their interest in their studies would increase as well as their motivation and productivity. Hindrances to the provision of more programming of this nature included the rigidity of high school programming and pressures evolving from the workload and emphasis placed on academics; factors such as these, according to the students, did not allow much flexibility to individualize programming for students nor

time or space to explore various interest areas. In addition, it was felt by some that teachers did not have the time, expertise, nor in some instances, the interest to accommodate programs for individual students.

- Views of parents and teachers generally conformed to those of the students. On average, it was felt that the students could benefit from more opportunities which offered additional stimulation and various alternatives to the regular program.

6. Teacher Awareness Re: Students' Identification as Gifted/ Talented

A relatively small percentage of high school teachers instructing the students were informed that these students had been identified as gifted or talented. Approximately one-quarter instructing the students in grade 10 and in grade 12 indicated being informed earlier in the school year of the students' classification. A larger percent of the teachers of OC students (38%) compared to R students (17%) in grade 10 were informed of the nature of the students. The percentage of those informed at the grade 12 was approximately equal in the two groups.

Comments added by some teachers in grade 10 indicated that they learned of the giftedness of OC students from school records which stated that the students came from Oakley or by being informed by the students themselves. Gifted/talented students coming from regular junior high schools apparently were not as easily identified.

7. Parental Satisfaction With Schools and Services

Parents rated their satisfaction with various aspects of their sons'/ daughters' schools from grades 9 through 12. Included were ratings of the assistance and support their children received in regard to developing their gifts/talents, overcoming weaknesses in subject areas, forming work/study habits, and establishing short/long term academic goals. Also rated was the feedback parents received regarding their children's progress, the information they received regarding programs/ activities advantageous for their children, teacher expertise in promoting the abilities and interests of gifted students, and the opportunities provided by schools t stimulate their children's interests. Parent ratings indicated the following:

- A decline in satisfaction from grade 9 to grade 10 was expressed by

parents, and generally little change thereafter across high school grades. The amount of change from grade 9 to 10 tended to be greater for the OC group, but the decrease in their satisfaction did not surpass the lower level of satisfaction expressed by the parents of R students.

- Group differences were obtained mainly at the grade 9 level and in areas concerning services, feedback, and information specific to the gifts/talents, abilities, and interests of the students. In this regard, compared to R parents, OC parents expressed a higher level of satisfaction with: the opportunities provided in grade nine to stimulate the interests of their children, the encouragement their children received to develop their gifts/talents, the expertise of teachers in developing their children's abilities and interests, the information they received about available programs designed to meet the needs of the gifted/talented, and the feedback provided by schools about their children's progress in their area of giftedness/talent.

  Another area in which significant group differences were obtained was in regard to the counselling students received in forming short and long term academic goals. The OC group indicated a higher level of satisfaction compared to the R group with the help their children received in goal setting both at the grade 9 and grade 10 level.

- The proportion of parents in each of the groups indicating dissatisfaction with various aspects of schools and services generally ranged from none to approximately one-third. Areas which appeared of concern to a sizable proportion of parents were as follows:
  - One-quarter of parents of OC students and one-third of parents of R children in grade 10 were dissatisfied with the information they received about programs available for the gifted/talented. Close to one-quarter of each of the groups also were dissatisfied with the information they received in the latter high school years regarding programs/activities available in the interest areas of their children and the feedback they received about their children's progress in areas of giftedness/talent.
  - Approximately one-quarter of R parents indicated dissatisfaction with the opportunities provided in grade 10 to stimulate their children's interests and the encouragement provided across the three years in high school to enhance the growth of their children's gifts/talents. Approximately one-quarter also were

dissatisfied with the counselling their children received in high school years (re: academic goals) and with the assistance they received in developing work/study skills particularly in grade 10.

- Close to one-quarter of parents of OC students indicated dissatisfaction with the assistance their children received in grade 11 in overcoming weaknesses and the expertise of their children's teachers in helping them to develop their abilities and interests. One-quarter also were dissatisfied with the counselling their children received in the latter high school years in setting academic goals.

8. Student Attitudes, Skills, Abilities, and Behaviour

Various aspects of student well-being in school were rated by the students, their parents, and their teachers. Those rated by students and parents mainly involved student attitudes toward school, pressures encountered from various sources, and their personal and social adjustment in grades 9 through 12. Teachers' rated students on a number of dimensions in grades 10 and 12 which included student behaviour and performance in class.

Student ratings across grades 9 through 12 indicated the following:

- The majority felt moderate to extensive confidence in, respect for, and rapport with their teachers; enjoyment of course work, acceptance by peers; positive self esteem; confidence in their capabilities; self-responsibility for their own progress, and motivation to do well in their studies. Low ratings were, in almost all instances, indicated by less than 20% of the students. The exceptions were students' rating of their motivation and enjoyment of course work where up to 21% indicated little interest in doing well in school and up 29% felt little enjoyment of their studies.

  A sizable proportion also felt a moderate to a high degree of rapport with classmates with respect to sharing interests and ideas. A minority (up to 43%) felt they shared little with their classmates in this regard.

- Pressures from some sources were greater than from others.
  - Those from peers not to excel in course work and from being labelled as gifted in most instances were low to moderate for the

majority of the students. However, a minority of some size (21% to 27%) indicated high pressures with respect to gifted labelling at the grade 9 and 10 levels.

- Those from the workload and from the family to achieve high marks were more substantial for a sizable percentage of the students. Close to 30% to 50% of the students indicated high pressures from the workload particularly in high school grades and from the family across grades 9 through 12.

- A relatively substantial incidence of boredom with school was reported by the students. In this regard, from 25% to 55% indicated a high level of boredom across grades 9 through 12.

- Changes across grades 9 through 12 were indicated by students in regard to their relations with teachers and peers, and their attitudes toward school work. Students, on average, reported a decline from grade 9 to grade 10 and subsequent recovery over the next two grades in such aspects as their confidence in and rapport with teachers, enjoyment of course work, feelings of fitting in and being socially accepted, and sharing of interests and being intellectually stimulated by classmates.

  Significant group differences were obtained with respect to students' ratings of enjoyment of course work and boredom with school. The OC students, overall, indicated a higher level of enjoyment of course work. This group also expressed a lower level of boredom in grade 9 compared to the R group; at the grade 10 level, boredom increased to match that of the R group and remained stable over the high school grades. A trend was also evident with respect to the students' ratings of their sharing interests and ideas with classmates. In this latter case, the OC group felt more rapport with their classmates in grade 9 compared to the R group; in grade 10, however, positive ratings of the OC group decreased to match that of the R group's. In both boredom and rapport with classmates, ratings of the R group across grades 9 and 10 remained relatively unchanged.

- Student ratings of frustration with school work and pressures from various sources shared a common pattern. In this regard, a rise in feelings of frustration and pressures was indicated by the students in grade 10 relative to grade 9, a drop at the grade 11 level, and either a rise or leveling at the grade 12 level. No significant differences between groups were obtained.

- The two group's ratings on personal dimensions (i.e., self-esteem, confidence in their capability, self-responsibility for academic progress, and motivation) were comparable and relatively stable across the grades.

- Statistically significant differences obtained between groups and across grades were small in a practical sense. They accounted for a small amount of variability amongst the students' ratings.

Overall, the findings suggest that students enter an adjustment period when they move from junior into senior high. Students' positive relations with teachers and peers decline in grade 10 from that of grade 9, they become more frustrated with school work, find less enjoyment of school, and feel more pressure with respect to their workload and marks during this period. The OC group experienced greater change particularly with respect to adjusting to a less stimulating academic and social environment in their grade 10 year compared to grade 9. Lower ratings of the OC group, however, did not surpass those of the R group.

Students apparently recovered from the downturn experienced in grade 10. In most instances, the upswing was gradual with former high positive views regained by grade 12. Exceptions to this trend involved ratings of frustration with course work and pressures from the workload which increased in grade 12 after an initial downswing in grade 11 from grade 10. These feelings coincide with the students' push in grade 12 to write the diploma examinations and also acquire the necessary qualifications for graduation and scholarships.

In the main, parental ratings of their sons/daughters on the aforementioned dimensions matched those obtained from the students' self-ratings.

Findings with respect to teachers' ratings of the students (in 1986 and 1988) were as follows:

- The majority reported that the students displayed considerable abilities, skills, positive attitudes, social adjustment, and personal development. The percentage indicating students' minimal display of positive attributes was generally less than 25%.

- Mean ratings of positive attributes which tended to be amongst the

highest involved students' comprehension of course material and their regard for teachers. Also relatively high were the means for students' self-esteem, confidence in their capability, ability to work independently, and self-responsibility for their own learning. These ratings generally confirmed those indicated by the students' themselves.

- Areas in which a larger percent of teachers indicated low levels of skills/abilities amongst the students involved their self-motivation in learning, motivation to excel, and work/study skills. Generally around 20% found their students lacking in these respects.

- Problems amongst students generally appeared minimal. Few teachers indicated incidences of any magnitude with respect to disruptive class behaviour (up to 13%) and socio-emotional problems (up to 12%) amongst the students. Also a small percentage of teachers (up to 21%) perceived that students avoided being singled out in class or being labelled as gifted.

- A few significant differences were obtained between teachers' ratings of the two groups of students. These were related to the social domain and the R group's advantage relative to the OC group: teachers perceived that the R group was accepted by peers to a greater extent than was the OC group in grade 10 and 12, and also displayed greater understanding and tolerance of less capable others, particularly at the grade 12 level. These differences, although statistically significant, accounted for minor variations in teacher ratings.

9. Personal Problems

A small number of students (up to 12%) indicated extensive health and family problems impinging on their progress in high school. Ratings of the two groups in these two respects were comparable and stable across high school years.

10. Retrospective Views in Grade 12

Retrospective views on a number of issues were obtained from students and their parents at the end of the students' grade 12 year. Information obtained from respondents was as follows:

Quality of Education Received

Views of students and their parents regarding the quality of education students received in elementary, junior, and senior years were positive. A large percentage (approx. 60% to 80% of the students and parents) rated the quality of education at each of the levels of schooling as above average (i.e., from "good" to "excellent"). Most of the remainder rated the quality as average. Few (up to 15%) rated the quality as below average.

Significant differences were obtained between groups and also between levels of schooling. The OC students' ratings of the quality of education they received in junior high years (i.e., Oakley Centre years) was higher than that indicated by R students; in this regard, 80% of the OC students compared to 54% of the R students rated their junior high education as above average. The OC students' ratings also indicated that, on average, they felt the education they received in junior and senior years was superior to that received in elementary. Mean ratings of parents followed the same pattern as that of the students.

Explanations given by students and parents for differences in their ratings of the levels of schooling suggest that a number of criteria served as a basis for judging educational quality. The following aspects apparently were contributors to students' views of a superior education:

- teachers who were expert, inspired, and caring
- a school program which was strong in all areas (math, sciences, humanities, and fine arts)
- a curriculum which adequately covered the basics, prepared students for the next course level, and consisted of material of a functional or practical nature (e.g., relevant to future careers)
- courses, programs, and activities which were special in nature (e.g., IB, PEP, IS, Bilingual), interested and challenged students, offered advanced material, and provided enrichment
- a school environment which promoted high academic standards, emphasized excellence and learning, and provided incentives and encouragement to students to strive to do well
- an instructional approach which was sensitive to the needs of the individual student, accommodated the learning style of the student, allowed students to advance at their own rate, offered opportunities for independent work, and allowed students freedom to explore their

areas of interest
- good balance between flexibility and structure in course work
- support for gifted students through the provision of special programs for the gifted, opportunities for interaction with intellectually advanced peers, staff understanding of the nature and needs of gifted students, encouragement of the development of students' gifts/talents, and promotion of students' personal growth (self-understanding re: one's giftedness).
- development of students' abilities, skills, and approach to learning (thinking skills, creativity, work/study skills, and self-responsibility).

In addition to many of the aspects identified by the students, parents also considered the following as contributors to a superior education for their children:
- a school program which offered a wide range of options
- a school environment which eased student social acceptance and promoted social maturity.

Other comments made by parents and students suggest that the attitudes of the students toward school influenced their receptivity to the educational opportunities offered. At various levels of schooling, it was indicated that some students did not receive the benefits of the education offered as they were disinterested in school, had little motivation, and did not do as well as they could have with greater effort on their part.

Course of studies selected in high school

A sizable percent of the students (29% OC and 45% R) felt that, in retrospect, they could have made better choices with respect to the course of studies they selected in high school. Explanations provided by these students, in the main, involved work in IB and options. In regard to IB, some students felt that they would have profited if they had taken (more) subjects in IB as this route would have been more challenging for them, motivated them to do better in school, and also better prepared them for post-secondary studies. Other students, however, felt that it would have been advantageous if they had not taken any or as many Honours/IB courses; the students indicated they then would have experienced less pressure, and would have had more more time to take options, socialize, and take part in sports. In regard to options, some students indicated that they wished they had taken more options (e.g., PE, computer processing, drama, writing, business

education) as they had enjoyed course work in these subject areas in previous years, would have found the knowledge of the subject matter useful to have in their future endeavours, and would have appreciated a more rounded educational experience than the strongly academic route taken. Others indicated that they wished they had taken options different from the ones they had selected; they felt a different selection would have been more useful to them, and afforded an opportunity for them to develop and exercise their particular talents.

Sixteen percent (16%) of OC parents and 33% of R parents indicated that better choices could have been made with respect to the course of studies their sons/daughters selected. In most instances the alternatives that parents would have wanted for their children corresponded to those indicated by the students.

Both students and parents mentioned that, in some cases, various circumstances prohibited the selection of preferred courses. Some respondents indicated that due to conflicts, students were unable to timetable the courses that they wanted to take. Some indicated that pressures such as the IB workload and also the drive to achieve top marks in academics (in order to receive Honours and scholarships) left little time for students to take options which might have been of interest to them. Others indicated that courses or activities of interest (in IB or Honours) were not open to them or not offered in the schools they attended. Yet others indicated that students were discouraged from pursuing various interests either because of the little importance attached to activities which were non-academic in nature or because they did not demonstrate a high level of talent in the particular area (e.g. art, sports).

Counselling received re: course selection for future goals

About one-quarter of the students in each group indicated they did not receive adequate advice from their schools on which courses they needed to reach their academic goals. Reasons given by students included the difficulty they experienced in getting to see their school counsellor when they needed advice, their dissatisfaction with the approach taken by their counsellors (little choice offered to students in selecting or changing courses, focus on getting students graduated rather than planning for their careers, unwillingness to seek information required by students), and the unhelpfulness of the advice given by counsellors (based on little knowledge about the student, unsuitable direction

given to the student). As well, some students wished that they had been better informed about such aspects as the courses needed for entry into university and the value of taking options in high school (e.g., to nurture interests, to explore areas which potentially might be of interest career-wise).

Participation in extracurricular activities in high school

A relatively large proportion of students indicated either moderate (about one-third) to substantial involvement (about 40%) in extracurricular activities in their high school years. The remainder, about one-quarter of the students, indicated minimal involvement. No significant differences were obtained between the ratings of the two groups.

Approximately one-half of the students in each group wished they had participated more extensively in their high schools' extracurricular activities. The majority of these students, however, indicated they were unable to participate as much as they would have liked either because there was not enough time due to their carrying a heavy work load or having other commitments, or because they feared jeopardizing their marks and chances for scholarships by channeling time away from academics. Other students indicated they were reticent in joining various activities as they did not feel sufficiently skilled (e.g., in sports) to take part, were uncomfortable with the people who were involved in the activities, or were too shy to make initial contact. Others felt limited by such factors as the inconvenient scheduling of the activities, the narrow range offered in their school, or the way that the activities were organized (e.g., the "politics of team sports"). Yet others indicated regret that they had not made the effort to join as they later came to realize that they would have enjoyed participating, and that participation would have enhanced their personal development and also improved their chances for scholarships.

Parent ratings indicated that, on average, they too would have liked to see their sons/daughters more involved in school activities. An advantage of greater participation, according to parent views, was the acquisition of a more rounded educational background.

Generation and loss of interests during high school years

A sizable percent of each of the groups of students indicated the

development of new interests (60% OC and 48% R) and the loss of those held in earlier years (49% OC and 32% R). A greater percentage of OC students than R students indicated both circumstances.

A range of new interests were indicated by the students. Most frequently mentioned by both groups were interests in various sciences and science/math/computer related subject areas. Other interests mentioned by the students included literature, poetry, writing, journalism, drama, music, languages, history, current events, economics, law, political science, philosophy, psychology, and outdoor education. Interests in these areas, according to some of the students, were stimulated by such aspects as the nature of the course material (new, advanced, comprehensive and indepth coverage), teachers' approach to the material and the students, and the approach required for learning the material (e.g., lab/research work, higher order thinking, logical and deductive reasoning). Other students indicated that their interests arose from experiences with work conducted in the U of C science enrichment program, from helping friends to learn the material, and from interacting with others in the school who shared interests in the subject area. Some of the students indicated that exposure to the material lead them to discover that they had particular talents in the area of study, and also stimulated them to want to learn more about the subject area, to pursue studies at a more advanced level, and to pursue the field of study as a career.

Students indicated a loss of interest in a number of subject areas, ranging from academics through to various options and electives. Reasons given for a loss of interest in math/science subjects involved such aspects as the students' inability to do well in the subject area, feelings of frustration in learning the material, disinterest in the topics investigated at the high school level, development of competing interests and time commitments in other areas, and feelings that a background in the subject area was of no future value. Further reasons involved the curriculum and instruction: students indicated in some cases they found the material repetitious, the programs disorganized, the emphasis on memorization uninspiring, and the teaching of average quality. In other academic subjects (English, social studies, and French), students indicated declining interest was due to the poor quality of courses and teaching, and also their dislike of the nature of the assignments. In the remainder of the subject areas, the reasons given, in the main, concerned students' inability to maintain their interests in the subject areas due to competing interests or

commitments elsewhere, and also due to the little value placed on such pursuits at the high school level.

Close to one-half of the parents in each group indicated that their sons/daughters had developed new interests as a result of experiences in high school and approximately one-quarter indicated a loss of those from previous years. Interests gained and lost indicated by the parents included a broad range of subject areas most of which were identified by students. Reasons for gains were attributed to the stimulation of excellent teachers and interesting material, and students' experiences in special programs, extracurricular activities, and part-time jobs. Reasons for losses were attributed to the structure of courses and the nature of the material (unstimulating material, too little opportunity to do creative work or express personal views); little encouragement offered to students to explore areas of interest; and problems encountered in pursuing courses of interest due to timetabling conflicts, inavailability of advanced levels of study, and the time commitment required for academics. Also indicated were the students' poor performance in the subject area, their preoccupation with other activities, and their switch in interest from one subject area to another.

Positive and negative effects of earlier school experiences

Students were asked if any of their experiences from junior high years (Oakley Centre years for the OC group) had a significant a) positive effect and b) a detrimental effect on their progress in high school. A larger percent of the OC group compared to the R group reported both positive (77% versus 52%) and negative (63% versus 29%) carry over effects from earlier experiences.

OC students indicated that various learning experiences from their Oakley Centre years proved advantageous for them in high school. Some students encountered carry over effects from the course work conducted at Oakley Centre in such areas as math, social studies, English, German, and computers; they felt they had acquired advanced or broad-based knowledge at Oakley, and also continuing interest in the subject matter and motivation to do well. Carry over effects due to aspects of Oakley Centre programming were also indicated: students felt that their experiences with respect to doing challenging work, working independently, exploring and expanding their interests, expressing their creative talents, and taking part in a variety of enrichment activities contributed to their growth in academic and personal domains. Oakley's emphasis on social consciousness and understanding of

others as well as students' interaction with Oakley teachers and classmates also helped to advance self-understanding, interpersonal skills, and the ability to relate to others. Some students speculated that had they not gone to Oakley Centre they would not have accomplished as much as they had in high school: they indicated that in high school they may not have strived to develop their abilities, not taken advantage of a challenging program such as IB, not been able to cope with studies, or might have dropped out of school.

Negative effects resulting from the Oakley years mainly involved students' difficulties in adjusting to high school and their experience of gaps in knowledge and skills at the high school level. With respect to adjusting to high school, some students indicated that they were bored and felt little motivation to do well in their high school studies; they found high school unstimulating compared to Oakley and found it difficult to generate interest in their school work. Other adjustment difficulties involved students' social integration into high school after their years in a special, congregated setting. In this regard, some students indicated that they contended with feelings of superiority and conceit in high school as well as a tendency to be overconfident in their abilities; in contrast, others indicated they downplayed their abilities in high school in order to appear "average" and to fit in with the crowd. Also a problem for some students was the loss of friendships with Oakley students who moved on to different high schools, their difficulty in establishing a new circle of friends, feelings of not belonging, and associating with classmates who were relatively immature. With respect to gaps in knowledge and skills, some students felt disadvantages in high school as they had not acquired an adequate foundation in their Oakley years in various aspects of English (spelling and grammar), French (grammar), math, and social studies. As well, some students felt they had not developed sufficient work and study skills while in Oakley in order to function effectively at the high school level.

The R group also identified a number of learning experiences from their junior high years which proved advantageous for them in high school. A positive attitude toward school and a desire to continue studies in particular interest areas, according to some students, were instilled by their junior high teachers and persisted into high school years. The advanced level of studies conducted in such subjects as math, English, and science, and the confidence gained in these subject areas in junior high, according to some students, contributed to their success in high

school work. Experiences with individualized timetabling and the workload in the junior high program were of help to students in preparing them for such aspects at the high school level. Involvement in junior high in extracurricular activities such as field trips and committees/councils, it was felt by some students, contributed to their growth in interpersonal skills and also gave them experience in performing a leadership role. Also, attendance of a regular school in junior high was considered advantageous for some as was attendance of a school which contained both junior and senior high levels; it was felt that social adjustment in high school was eased as students had learned how to fit in with others from a wide range of backgrounds or established friendships which continued from junior into senior years.

Negative carry over effects from junior high indicated by the R students, in the main, involved various attitudes, skills, and abilities. Some students indicated that they found they were unprepared for academics at the high school level; they felt that they did not have sufficient self-discipline and work/study habits to manage their studies effectively. Others indicated that they carried with them into high school a dislike of various courses, and also a negative attitude toward school in general. One student indicated that his unpopularity continued into the high school years.

Views of parents were also obtained with respect to the effects of junior high experiences on their sons'/daughters' well-being in high school. A larger percent of both groups indicated the influence of positive (80% OC and 48% R) compared to negative (24% OC and 30% R) carry over effects. More OC parents perceived positive carry over effects from junior high years than did R parents.

A number of positive and negative effects from Oakley Centre experiences were indicated by OC parents.

- Positive effects described by parents, in the main, involved students' development of interests in various pursuits at Oakley which continued into high school, and growth in personal, social, and academic domains which contributed to their adjustment and success in high school. Interests stimulated at Oakley, according to parents, were in such areas as computers, electronics, drama, and music. Personal growth involved such aspects as the development of individualism, acceptance of being different, independence, self-confidence, and self-esteem. Social growth included students' development of interpersonal skills, tolerance for different others,

and friendships which persisted into high school years. Growth in academic related areas included the development or enhancement of students' cognitive skills, positive attitudes toward learning, self-motivation, ability to work independently, and study/work skills.

- Negative effects described by parents, in the main, involved social disadvantages experienced by the students. In this regard, parents felt that a small school such as Oakley did not offer children a wide range of social opportunities and therefore, experiences from which to develop a high level of social competence. Also, busing out of the neighbourhood during Oakley years and subsequent return to a neighbourhood school for senior years lead to the loss of friends, first from the community and second, from Oakley. Other disadvantages mentioned by parents were students' overconfidence and sense of superiority resulting from their years at Oakley, underdeveloped study habits, and underdeveloped athletic abilities.

R parents also identified a range of positive and negative effects extending from students' junior high years.

- Positive influences included the quality of junior high teachers and schools' emphasis on achievement which parents felt contributed to the extent of students' learning, positive attitudes, and preparation for senior high years. As well, various successes at the junior high level contributed to such aspects as students' self-confidence, motivation to do well in high school, desire to take challenging programs in senior years, and continuation of activities at the high school level which were enjoyed in junior years. Also of continuing value to students was the background gained in using creative abilities, performing a leadership role, and making decisions on one's own.
- Negative influences were students' underdeveloped abilities in academics in general, and specifically in such areas as math, athletics, and music; in these cases, parents felt that their children did not have sufficient opportunities at the junior high level to develop skills either to continue or to do well in these areas in senior years. Other concerns were students' reluctance to take part in school activities in which they were unsuccessful in junior high years, negative attitudes toward school, lack of self-discipline, and poor work/study habits which persisted into senior years.

Changes which would be made if school years were to be repeated

A large percent of students in each group (63% OC and 71% R) reported that they would make changes if they had the chance to do their school years over again. The majority of changes indicated by the students involved course selections within special programs and options which, in the main, corresponded to those described earlier (in reference to the program of studies selected in high school). Other changes identified by the students involved a number of aspects of students' schooling. A change of schools was mentioned by a small number of students; two said they would not go Oakley, and three others said they would select high schools better suited to their needs. Greater involvement in extracurricular activities or more intense involvement in activities of interest in high school was indicated by a number of students, and also the investment of greater effort in developing social relations and skills. Also of interest to some students was an arrangement which reduced their workload and allowed them more time for enjoying school years; for others, however, interests lay in improving such aspects as their motivation, attitudes toward school, work habits, thinking skills, and marks.

Approximately one-half of the OC parents and one-third of the R parents indicated that given a second time around, they would have their sons/daughters do aspects of their school years differently. Approximately one-third of the changes indicated by the parents concerned the schools attended by the students. In this regard, one parent indicated that he/she would not have his/her child attend Oakley, whereas three others would have their children attend at an earlier age, or given the opportunity would have them attend an Oakley type school in their senior years. Other alternatives indicated by parents included preferences for either smaller high schools, private schools, or high schools which offered an enrichment type program rather than IB; schools such as these, parents felt, would recognize and promote the special interests and talents of their children. Of the remainder of changes indicated by parents, approximately one-half concerned the programs/courses taken in high school and the school activities in which their children participated, and close to one-half referred to their children's attitudes and skills in various areas; most of the types of changes in these respects described by the parents corresponded with those indicated by the students. An additional area of change indicated by two parents concerned their relations with their children. One of these parents said that he/she would encourage his/her

child to be more communicative about daily activities and progress in school. The second felt that he/she would be more understanding of the problems his/her child faced in elementary grades and be of greater assistance to the child and his/her teachers.

D. POST-HIGH SCHOOL EXPERIENCES

1. Post-Secondary Students

Success in post-secondary studies

Post-secondary students were asked how well they were able to organize their program to meet their needs and how successful they were in their first year of post-secondary studies. Students' responses indicated the following:

- A majority (92% OC and 79% R) were able to take the courses that they wanted or needed. Those who indicated otherwise (2 OC and 4 R) in most instances encountered problems either with courses being full or a poor selection offered in interest areas.

- A larger percent of the OC group (31%) compared to the R group (8%) had applied for advanced standing in university courses. Of these students, two said they were unsuccessful in their applications; one was unable to gain entry into an advanced photography course because it was full, and one was unable to gain approval to take a graduate level environmental design course.

- Approximately three-quarters of the students in each of the groups reported they had passed all their courses. Fifteen percent (approx.) did not know their status as they had yet to receive their transcripts. The remainder, six students (3 OC and 3 R), indicated they had failed from one to three courses. Five had failed courses in the math, science, computer science, and economic fields; reasons indicated for failure concerned such factors as the students' heavy work load, their inability to keep up, poor study skills, and insufficient effort put into course work. One had failed French, and felt that a year's absence from studying the language contributed to his poor performance.

- Grade point averages ranged from poor to excellent. Of the students who provided their averages, the majority (62%) were in the upper

range of the scale used in their institutions with most of the remainder (25%) in the middle range. A small percent (13%) were in the lower range. These latter students explained that their poor performance was a consequence of their being unprepared to manage post-secondary studies (i.e., insufficient independence, discipline to do well at a post-secondary level; poor study skills) or their continuing to invest a minimum amount of effort in their studies as they did in high school.

- Approximately two-thirds of each the groups were dissatisfied with their level of achievement at the post-secondary level. The explanation most common amongst the students for their dissatisfaction was the belief that they could have done better if they had tried harder, invested more time studying, or had done more work. Other explanations involved students' disappointment with their marks and factors which hindered their performance. With respect to disappointments, students indicated that their marks were not as high as they would have liked or needed to reach their goals, were not as high as that received in high school, or were not an accurate reflection of their abilities. With respect to factors hindering performance, students indicated that they were disadvantaged by poor time management skills, study skills, and memorization capabilities (in courses which were predominantly memorization). Other factors identified by the students were their poor comprehension of the material in some subjects, heavy weighting of final exams and marks slipping at this point of studies, the distractions encountered in university, and student adjustment to a new environment. Also a problem for a few students were frustrations encountered with unchallenging course work, poor instruction, and biases of professors.

Adjustment to post-secondary studies

Various aspects of students' adjustment to post-secondary studies were examined. Included were students' preparation for post-secondary studies, the difficulties experienced in adjusting academically and socially, positive and negative carry over effects experienced from public school years, and students' enjoyment of their studies and student life on campus. Also included were personal changes students had undergone since leaving high school.

Preparation for post-secondary studies

A large part of each group of students (65% OC and 58% R) felt that they were well prepared for post-secondary studies, with a small percentage (12% OC and 17% R) of the remainder indicating "some" preparation. Approximately one-quarter of each group felt little preparation.

Students described a number of ways in which they were prepared for post-secondary studies. Some indicated that they encountered no problems in adjusting to university and course work at this level of studies; they reported that they were well prepared academically, had a good foundation of knowledge and skills in various subject areas, and were able to manage their workload effectively. Others found that their work/study habits, time management skills, ability to work independently, exam writing abilities, and general approach to learning (e.g., enthusiasm, motivation to learn, and determination to succeed) were of great help to them in conducting post-secondary studies. Also mentioned were preparedness with respect to social skills and making course and career decisions.

Preparedness was attributed to various factors:

- A large part was attributed to programming at the high school level. Students indicated that advanced courses (e.g., Math 31, U of C math extension courses for high school students), special programs (e.g., IB, IS, STRETCH), and course work in general contributed to a good knowledge base and/or gain in skills to manage post-secondary studies effectively. Also mentioned with regard to programming were such aspects as benefits acquired as a result of having good high school teachers, participating in contests (i.e., math), and good continuity between high school and university with respect to difficulty of courses and weighting of final exams.
- Another part was attributed to students having knowledge of what to expect. In this regard, students indicated that the advice they received from high school teachers, family, and friends as well as experience gained through visits to the campus was helpful in easing their adjustment to the new environment.
- Also, preparation was attributed to the students themselves and their approach to studies. Students indicated that ingrained work habits contributed to their abilities to cope with post-secondary studies. Also mentioned was one's common sense in judging what material to study.

Comments made by students in regard to ways in which they were not prepared or could have been better prepared, for the most part, referred to deficiencies encountered within themselves and deficiencies encountered in high school and post-secondary institutions.

- Deficiencies identified at the student level concerned their skills and motivation. Indicated most frequently by the students were their poor study skills, and also insufficient maturity/discipline and motivation to handle their workload and studies effectively. Other aspects mentioned were poor skills in time management, writing, grammar, spelling, math, science, and French. One student also mentioned poor social skills.
- Deficiencies at the high school level generally referred to the information relayed to students, and the standards and demands placed upon them. With respect to information, it was felt that teachers should have advised students more thoroughly about what would be expected of them at the post-secondary level of studies. In regard to standards and demands, students identified a number of needs: better articulation of the high school program with that of university, a more advanced high school curriculum, higher standards for essays (comparable to expectations at university) and work in general, faster pace (shorter timelines for assignments), and more opportunities to develop independence and independent learning skills.
- Deficiencies at the post-secondary level generally referred to the approach of professors. Mentioned were professors' unstimulating lectures and lack of objectivity with respect to teaching and marking.

One additional aspect mentioned concerned career choices. One student indicated that decisions yet had to be made on which field to enter and what direction to take in selecting courses.

A sizable percent of each group (62% OC and 50% R) felt that their schools could have better prepared them for post-secondary studies. Most of the suggestions indicated by the students concerned the deficiencies in skills, attitudes, and programming described above and the need to address these problems. Other improvements mentioned by the students covered a range of areas: needs indicated were more opportunities for active (compared to passive) learning, more extensive instruction in the maths and sciences for those entering these fields, more opportunities for creative work, and more opportunities for off-campus activities. Also indicated was the need for better counselling of students regarding career choices, timing of university entrance

(advisability of a time-out period for those too immature to handle university studies), and the range of options/activities available in university.

Academic and social adjustment

A relatively large percent (42% OC and 68% R) of the students indicated they had encountered difficulties in adjusting to academic work at the post-secondary level. A problem most frequently mentioned by the students was their difficulty in managing a heavy work load. Also mentioned were problems evolving from laziness, little motivation to excel, and poor study, learning, and time management skills. A number of students added that part of the first year was spent in learning the skills needed manage their studies; included was their learning how to handle the instructional approach at university (lectures, textbook studies, heavy demands at mid term and finals, the marking system) and learning what was expected of students (independence and self-responsibility, quality of work, meeting deadlines for work completions, style and thought processes required in papers).

None of the OC group indicated experiencing problems in adjusting socially, whereas one-quarter of the R group (6 students) expressed difficulties in this domain. Of these latter students, one indicated that she had been ill at the beginning of the term and was not able to orientate to the social life on campus and in residence until the second semester. Three others apparently felt a loss of the social support they had established in high school years; they indicated the need to create new friendships (a difficulty if one did not play sports, according to one student) as their circle of friends from high school either did not continue on to university or did not assign a great deal of importance to their post-secondary studies. The two remaining students did not find university a good place to make friends: one found the people unfriendly whereas the second expressed distaste for social activities revolving around "cheap beer".

Carry-over effects

Approximately one-third of each of the two groups of students indicated carry over effects from school years which proved advantageous to them at the post-secondary level. Comments of these students indicated that a large proportion of the positive effects originated in high school years, with an ever-decreasing proportion extending backward in time.

- High school years: Positive carry-over effects included a foundation of knowledge and skills in academics and in one's chosen field of studies, ability to conduct large scale research projects, study and work skills, essay and exam writing skills, self-confidence, openness, leadership skills, interpersonal skills, and coping skills. Students indicated that the advantageous aspects stemmed from their experiences in special programs, advanced courses, courses in particular fields of interest, extracurricular activities in school, and programs outside of school (SHAD Valley, Encounters in Canada, summer French Immersion program). Also indicated was good continuity between school and university courses with respect to difficulty levels, and the experience of an earlier transition period - from junior to senior high - in which one learned to adjust to changes.
- References to junior high, but for one R student, were made by OC students. Positive OC effects which had a lasting impact were students' gains with respect to computing skills, research skills, self-responsibility and independent learning skills, self-confidence (in abilities, asking questions, giving oral presentations), and interpersonal skills. The R student indicated a lasting effect resulting from interacting with intellectual peers in a program for the gifted in junior high.
- A few students indicated lasting positive effects from elementary years. Mentioned were the development of a work ethic, self-confidence from one's accomplishments, and a personal support system through one's faith in God.

Also, effects evolving from experiences across school years were reported by a few students. Indicated were gains in regard to living skills, one's predilection to associate with "brains" and to seek help from capable others, and spin-offs from involvement in sports (leadership skills, social skills, and personal tenacity to strive to reach one's goals).

Close to one-third of each of the groups indicated experiencing negative carry-over effects from school years. These, in the main, concerned the persistence of poor skills and motivation. Most frequently mentioned were inadequate thinking and work/study skills, and students' lack of motivation in doing the work of which they were capable. In this regard, students indicated that school did not challenge them to learn, think, or work; they could do well with little effort, and consequently did not develop the foundation of skills and self-discipline needed to handle the level of work expected of post-

secondary students. Other aspects mentioned were inadequate skills in note-taking and spelling. Also problematic for some was the social realm. In this latter regard, students contended with under-developed social skills, conformity to peer pressures, and loss of self-esteem from poor peer relations.

Enjoyment of post-secondary studies and student life on campus

Students to a large extent enjoyed studies at the post-secondary level and student life on campus. Approximately 70% of the OC group and from 50% to 60% of the R group indicated a high level of enjoyment of these two aspects. The remainder, with the exception of a small percentage (up to 16%) expressed "some" enjoyment.

Five students (3 OC and 2 R) indicated little enjoyment of their post-secondary studies and four (R) indicated comparable feelings in regard to student life on campus. Comments indicate that problems with regard to studies for some of the students were their failure of several courses, and for others, their disappointment with course work (boring, irrelevant, superficial, outdated material). Comments made in regard to student life on campus indicate students' feelings of loss of the social support that high school friends provided, disappointment with the type of student encountered on campus, and feelings of isolation and insignificance at the university. Two students indicated their intention to withdraw from university as they were not ready to handle the work at this point in time.

Personal changes

A large percentage of each of the groups of students (73% OC and 92% R) indicated changes within themselves over the post-high school year. Most of the changes described by these students were positive in nature:

- Most frequently mentioned were gains in independence, self-responsibility, and maturity. These were mainly attributed to students' increased freedom and consequent need for greater self-responsibility in dealing with various aspects of their lives.
- Mentioned with some frequency were aspects of students' social and personal well-being. In this regard, students indicated an increase in their sociability and out-goingness, interpersonal skills, independence from peer pressures, and self-esteem. The changes were attributed to students exposure to the university environment (and

life in residence for some) where one interacted with a diverse and mature student population and where the onus was on the individual to initiate contact. Also contributing to the sense of well-being were experiences of greater acceptance of those whose interests lay in their studies, less stereotyping of individuals, and less pressure placed on individuals to conform.

- Remaining positive changes indicated by students were their increased enjoyment of studies, diligence in working and studying, and use of thinking abilities. Also mentioned were such aspects as increased self-confidence, assertiveness, leadership skills, as well as a broadening of one's perspective, realization of the importance of the family, health, and fitness, and the clarification of one's future goals.

A few students indicated changes of a negative nature. Included were decreases in students' interest and motivation in their studies, decreases in social involvement and extravertedness, and increases in narrow-mindedness and cynicism. Generally, these changes were attributed to negative experiences in university.

2. Graduates Not Attending Post-Secondary Institutions

Information in this section is based on eight graduates (4 OC and 4 R) who did not go on to post-secondary studies in the year following their graduation from Calgary high schools and one student (R) who left grade 12 without a diploma. Of the eight graduates, five were working full time, two were exchange students, and one was working and travelling abroad. The student who left high school without a diploma was short two credits. This individual had entered the workforce after his grade 12 year.

Responses of these former students indicated the following:

- All but one of the nine former students held jobs after leaving school. Jobs generally involved labour, service, sales, or receptionist type work. In addition, two who lived overseas taught English; one of these also worked as an au-paire girl. None of the jobs held were intended as career positions.

- Three of the former students, all of whom lived abroad, had attended classes since leaving high school. The two exchange students attended classes in their host country: one in a private high school in Venezuela and one in a language school in Italy. The third

student had taken language and art courses in France.

- All of the former students planned to go to university sometime in the future. Six intended to start in the Fall of 1989. Three had not made definite entry plans.

- The former students apparently benefited from their post-high school endeavours. The three who had spent time overseas gained much from their experiences living in a foreign country (in language skills and knowledge of the culture and people). Those who went to work, in addition to making money, also gained a perspective of what the work world was like in reality, and learned skills such as that needed to apply for a job and also to manage living on one's own. Also of benefit was the exposure to different experiences (for one former student, an uninspiring job) and a respite from high school studies which rejuvenated interests in extending one's education.

- Almost all of the former students reported changes in themselves occurring in the post-high school year. Most changes identified by the former students referred to an increase in maturity, self-understanding, self-reliance, confidence, and practical living skills which emerged from their experiences in working, travelling, and living on their own. Also indicated by some of the students were changes in perspectives: a broadening of one's knowledge of the world and its people gained through travel, and recovery of a positive outlook on life and future studies gained from a year's respite from school.

3. Fourth Year Students

Information in this section is based on four Calgary graduates who returned for a fourth year in high school either to upgrade their general to an advanced diploma (1 R and 2 OC) or to raise marks in order to qualify for scholarships (1 OC). Also included are two other students (2 OC) who returned for a second year in grade 12 in order to gain the requirements needed for a general diploma. Of the six students, three were at Bishop Carroll and three at CBE high schools.

Information obtained from the students indicated the following:

- Reasons why a fourth year in high school was needed or wanted were varied. Those who were working toward a general diploma apparently

had problems completing course work in earlier years due to poor work skills and approach to learning (e.g., little self-discipline and motivation, disorganization, distraction, inconsistent effort). Those who returned to upgrade their diploma came to take the math and/or science courses needed to qualify for an advanced diploma, two of these students had been heavily involved in the arts (music/drama) during their high school years and had not been able to complete all the courses they wanted within a three year period. The student who had returned to upgrade his marks for scholarship purposes had not originally intended to go to university. However, he had found that no meaningful job opportunities were open to someone of his age and educational level, and subsequently had to reconsider the route he would need to take to achieve his goals.

- Three of the students attended school for the full year and three attended in the second semester of the year. Two students had taken close to a full course load whereas the others had taken from two to three courses. All but one indicated they had passed or expected to pass all their courses. One dropped math 30 because of poor marks and planned to take it by correspondence at a later date.

- Both advantages and disadvantages were experienced in the fourth year. Advantages included students' accomplishment of their goals, the experience of a change of pace and a relative break before entry into university, and growth in the personal domain (e.g., gain in maturity, definition of future goals, appreciation of the effort needed to be successful in reaching goals). Disadvantages were students' feelings of discomfort in being in high school for a fourth year and their sense of time being wasted or not used profitably.

- All of the students indicated they would make changes if their school years were repeated. Four of the students indicated they would work harder, be more disciplined in getting their work done, and complete their high school in three rather than four years. One, however, indicated that he would take it easier in school, have more fun, and possibly plan a four year program from the beginning of high school. The remaining student indicated that he would continue the bilingual program in high school, and also take a wider variety of options in order to diversify his educational background.

4. Parents of Graduates

Information in this section was obtained from questionnaires returned by parents of graduates who attended post-secondary institutions, worked full time, or lived abroad. Also included are parents of one student who left grade 12 without a diploma.

Parents' responses indicated the following:

- The majority (76% OC and 86% R) felt that their sons/daughters had been moderately to extensively successful in their post-high school endeavours. A small percent (14% OC and 11% R) indicated little success. The remainder did not provide a rating.

  Parents judged their sons'/daughters' success in a number of ways. Those whose sons/daughters were in post-secondary institutions reported their successful adjustment. In this regard, some parents indicated their sons/daughters were well prepared in terms of their having the skills, attitudes, and abilities to manage their studies and work load effectively; others indicated that over the first year, their sons/daughters had acquired the skills and learning approach needed to be successful in their studies. Other aspects mentioned were sons'/daughters' adjustment to the size of the university and its impersonal atmosphere, and adjustment to living on their own in the case of those who had moved from the family home. Also mentioned were sons'/daughters' apparent enjoyment of studies and positive self-esteem.

  Parents with sons/daughters involved in endeavours other than attending post-secondary institutions also indicated their successful adjustment. Those with sons/daughters at work felt that they were doing well in regard to managing aspects of their lives (living on their own, dealing with people at the workplace, working on unfamiliar tasks). The parent of the exchange student felt that the daughter had been successful in handling new experiences encountered in living and studying in a foreign country.

  Sons/daughters were also judged successful with respect to their level of achievement in post-secondary studies. A sizable number of parents indicated that their sons/daughters had achieved good marks or were in general academically successful in their first year. Others indicated good marks in particular subject areas or, according to one parent, reasonable marks considering that little

effort was put into studies. Two others indicated that their sons/daughters had perservered and completed the year, although they had not done all that well in their studies.

Other successes involved sons'/daughters' motivation and goals. Indicated by parents were their sons'/daughters' clarification of career goals, their sense of purpose and direction, their drive to be successful, and their commitment to working hard and achieving their goals. Also mentioned were their sons'/daughters' involvement in a range of activities (extracurricular, social, athletic) in addition to their studies, and their growth in personal and social domains.

Parental views of ways in which sons/daughters in post-secondary institutions were not successful or could have been more successful, in most instances, involved the level of achievement attained by these students. In this regard, some parents indicated that overall grades were poor, whereas others indicated poor marks in specific subjects such as math and the sciences, English, or French. Yet others felt that the marks achieved by their sons/daughters could have been higher had they worked harder, studied longer, or had prioritized high grades. Problem sources, according to parents, were their sons'/daughters' deficient background in particular subjects, slow adjustment to university and its expectations, poor work/study habits, poor time management skills, and social distractions.

Other aspects mentioned by parents of post-secondary students involved adjustment difficulties due to attitudinal problems (sense of superiority and intolerance of less capable others, stance of being infallible) and poor interpersonal skills.

A few of those with sons/daughters involved in activities other than post-secondary studies indicated some disappointment. One parent would have liked to see more iniative from the son in moving up in the organization where he worked. Two others would have liked their sons to have gone to university following their grade 12 year.

- The majority of parents (81% OC and 78% R) indicated they were satisfied with the direction their sons/daughters had chosen for themselves. A small number expressed dissatisfaction (19% OC and 7% R) or mixed feelings (7% R). The remainder did not offer an opinion.

Reasons indicated by the parents for their satisfaction were as follows:

- nature of the goals. Indicated were parental satisfaction that sons/daughters were pursuing careers/studies in areas of interest or strength/talent. Also indicated was parental satisfaction that choices were investigated thoroughly, and that intended goals were realistic, appropriate, and in one case, longstanding.
- pursuit of high level education. Parents indicated being pleased that their sons/daughters decided to go to university. Higher learning, according to parents, was of value and a university degree of necessity for proof of one's abilities. Also, sons/daughters apparently enjoyed university and the academic challenge.
- achievement of a balance in life. Indicated was parental satisfaction that sons/daughters had formed both career and life goals, and were engaged in extracurricular and service type activities in addition to their studies.
- sons'/daughters' contentment with their choices. Some parents indicated that their sons/daughters made their own choices, and that they, as parents, supported these choices. They anticipated that their sons/daughters would enjoy and be successful in their chosen careers, and would make a significant contribution to the field of endeavour.

Parents (2) with mixed feelings indicated being pleased that their sons/daughters had chosen to go to university; however, one would have liked to have seen better marks, whereas the second felt that the field of study pursued by the son was not his area of strength. Parents who were dissatisfied indicated worries with respect to the goals chosen by their sons/ daughters and their sons'/daughters' drive or ambitions. In this regard, one parent felt that the field chosen by the daughter - fine arts - would not offer a viable career, whereas a second indicated concerns about the son/daughter having yet to define career goals. One parent indicated concerns that the son would not continue in university or would not define a specific field to pursue in his studies; the student, who was doing poorly in his studies, was in a university and program which were not his first choice. One parent felt that the daughter was too driven in her studies and life in general. Two others with sons who were working worried that they would not make concrete decisions about going to university or would not follow through on these intentions.

E. CBE STUDENTS BEHIND ONE GRADE

The information in this section is based on two students, one (R) who had repeated his grade nine and one (OC) who had not completed a full program in his grade 10 year. Information regarding the students' progress was obtained from the students themselves, their parents, and their teacher, guidance counsellor, or teacher-advisor.

The two students were dissimilar with respect to their problems and their success in overcoming them in their high school years:

- The OC student had difficulty in making the transition from Oakley Centre to the Bishop Carroll program. He indicated he had enjoyed the freedom of the Oakley program and elected to attend Bishop Carroll in his grade 10 year as it offered him the flexibility to advance at his own rate. However, he found he did not have the self-discipline needed to manage the Bishop Carroll style program; he had difficulty completing course work when there was little structure provided by teachers. Also, he had difficulty in adjusting in the social sense; he indicated he felt pressured because of being labelled as gifted and was uncomfortable in the school. He transferred to a CBE high school after approximately 1.5 years at Bishop Carroll.

  The OC student did very well in the second high school. His marks were in the high 80's and 90's and he expected to receive an advanced diploma with an award of excellence in the 1988-89 school year. He indicated he was satisfied with his progress and the academic route he had taken in high school - his interests were mainly academic and he had excelled in all the academic subjects taken. His family also expressed satisfaction with his academic record and his drive to achieve excellence in his academic endeavours. The student planned to enter university in the Fall of 1989.

- With respect to the R student, the decision to hold him back for one year was consensual. The student and his parents thought that a repeat of grade 9 course work would provide an opportunity for him to attain sufficiently high marks to enter the matriculation program in high school. A repeat of the year also placed him in the same grade as his age mates as he had skipped an elementary grade. The teacher interviewed indicated that the student's performance in

school had deteriorated in grade nine, and had shown signs of decline in earlier grades. The student displayed a number of problems: disorganization, lack of self-motivation, immaturity, and socio-emotional problems.

The repeat of the year proved advantageous for the student in some respects but not to the extent anticipated. On the positive side, a modified program developed for the student in his repeat year offered him remediation in his weak areas and the opportunity to work independently in areas of relative strength, an approach which he appeared to appreciate. Other gains were in the socio-emotional and motivational domains: the student appeared more comfortable in the school, had made friends, and had begun to form goals for himself. On the negative side, the student had not raised his marks appreciably in any of the repeated courses. In particular, he remained poor in math, and had been recommended for Math 13 in high school.

The progress of the R student in high school was disappointing in many instances. Grade 10 was a poor year for the student. According to his counsellor, the student had put little effort into studies as a whole, and was not successful in gaining credits in a number of the courses he had taken; he ultimately switched from the matriculation to the general diploma stream. The student indicated that in grade 10 he did not place much importance on his studies, did little work, skipped classes, and spent most of his time enjoying himself with new found friends; he said he was very young at this stage, and did not have the responsibility needed to handle the relative freedom offered in high school. As a result, he had to make up the lost year, credit-wise, in the following high school years. He did reasonably well in the latter high school grades particularly in the courses that interested him.

The student indicated that overall he was dissatisfied with his high school program. He said that in many instances he was forced to take courses in which he had little interest as the options available were limited. He did not feel that he had advanced his gifts/talents (i.e., in computing but also in writing, art, and music) to the extent to which he was capable in his school years. Also, he indicated that the structure of courses did not allow a student time to explore a particular interest area and to master the material. He felt that he would have been a more successful student if he could

have focussed on narrowly defined areas of study and had opportunities to work on material of personal interest to him.

The case of the R student appeared frustrating to those who worked with him. The high school counsellor felt that the student was capable of doing so much more if only he would put more effort into his studies. Attempts to interest the student in more challenging courses offered in the matriculation stream were unsuccessful, the student continued to favour the non-academic route. The mother indicated that her son had lost ground from grade seven; the student had not received the incentives needed to maintain his interests and to challenge him to excel. She felt that he had given up long time ago and in the latter years in high school, was putting in time until he received his general diploma. The student, himself, indicated he was looking forward to leaving school and going to SAIT and to university at a later date. He felt these institutions would offer him more opportunities to pursue his interests than high school did.

F. CBE DROP-OUTS

CBE drop-outs were two students (1 OC and 1 R) who withdrew from school in their grade 10 year and two (2 R) who withdrew in grade 11. One of the drop-outs returned to school in the 1988-89 school year after a two year absence.

Reasons for withdrawal from school varied amongst the drop-outs:

- One student had been asked to withdraw due to repeated truancy in her grade 10 year. The student indicated that she skipped school because she had found course work unstimulating (e.g., too slow paced, repetitious) and the atmosphere in the school too impersonal. Social adjustment was also a problem; the student indicated that she did not relate to students in her age group/grade and had established a social circle of older students and adult friends who shared her interests in acting and creative writing. The student's mother added that her daughter received little individual attention or encouragement in her talent areas in grade 10, and also received no counselling prior to being asked to withdraw.

- A second student withdrew from grade 10 shortly before the end of the school year. He had been absent a great deal that year because

of a lengthy illness. In addition, he indicated he also had a great deal of difficulty adjusting to high school - he felt out of place and alone, and missed the peer and teacher support he had received at Oakley.

He returned the following school year for a brief period. He indicated he did well academically but decided to withdraw after a couple of months into the school year as he found the classes too slow paced and boring.

- A third student indicated that a number of problems contributed to his skipping classes and ultimately withdrawing from school. He indicated that course work in general was too slow paced. In addition, he felt that unfair demands were placed upon him in a vocational course he was taking; he did not feel that he should have been required to do more work because he, in comparison to classmates, was a matriculation student. Also, he came into conflict with teachers with respect to his refusal to hand in written assignments - he did not feel that assignments served any purpose as he could pass exams in the course with high marks and no studying.

  The student's mother indicated that, on reflection, problems were evident in the early years of school. She suspected that intervention at that point of time (e.g., allowances for him to work at faster pace) might have resulted in his developing better attitudes toward school work.

- The fourth student had withdrawn twice from high school in his grade 11 year. The school had processed a proxy withdrawal the first time, he had stopped coming to school. The second time the student initiated the withdrawal, indicating that he needed a full time job in order to support himself. He had been estranged from his family for some time, and at that point was living on his own. He had close to a full grade 10 program when he left school (he had failed English and chemistry in grade 10).

  Unfortunately, the location of the student was unknown and no information obtained directly from him about his dropping out of school. The student's counsellor, however, suspected that in addition of family conflict, attitudinal problems also contributed to his withdrawal. The student apparently felt a high need for independence and resisted authority. He had difficulty fitting into

the school system - he would not complete assigned work unless he so desired. He did not appear to value an education. His attitude indicated that he did not understand why he had to be in school, and how being in school was relevant to his future.

Attitudes amongst the students regarding their return to school varied. Two of the students indicated plans for further education. One of these had returned to school in the 1988-89 school year; he had enrolled in Bishop Carroll in his grade 11 year and indicated he was making satisfactory progress. He planned to finish high school in the following year and enter the engineering faculty at U of C that Fall. The second of these students had passed high school equivalency exams and planned to go to college part-time until he had amassed sufficient funds to finance university studies; his primary interests were in writing, but he also hoped to expand his talents in music and drama. The third drop-out indicated no plans to pursue academic studies. She had worked in a field of interest (fashion design) since her withdrawal from school, and anticipated branching off in a business of her own sometime in the future. The counsellor of the fourth student (with whom contact had been lost) indicated she did not think that the student would complete high school; he did not see the need for a high school diploma, and furthermore, could not handle the high school program as it was structured. However, in the future, she anticipated that he would opt to enter an adult program, any job he might select would fail to challenge him after a period in time, and at this point he might return to gain the educational qualifications needed to reach his goals.

G. CALGARY STUDENTS WHO ATTENDED NON-CBE SCHOOLS

Information in this section is based on four students (3 OC and 1 R) who attended Bishop Carroll throughout their high school years and one student (R) who attended a private school in Calgary. Also included is one student (OC) who received a Heritage Scholarship to attend a USA private school which offered a full IB program. In this latter case, the student boarded at the school and returned to his family in Calgary for vacations.

Bishop Carroll Students

The four students chose Bishop Carroll for its independent studies program. It allowed two of the students with interests in Fine Arts to

conduct intensive studies in this area. It also enabled another student who raced competitively with Alberta ski teams to take several months off from school to pursue an athletic career. The fourth student appreciated being able to spend more time on subjects or projects which were of particular interest.

Students' views of the program were positive. The overall quality of education received in the program was rated as "excellent" by three of the students and "good" by the fourth. Numerous program advantages were indicated by the students:

- individual pacing allowed one to quickly finish courses which were found easy and to spend more time on difficult subjects
- independent learning skills were enhanced (time management, self-responsibility for own education, organizational skills)
- one had freedom to choose the subject matter of projects in some courses (options); also one had freedom to explore areas of special interest, and the flexibility to do extensive studies in these areas
- an honours program was available for those who wanted additional challenge
- a variety of options were available for those who were interested
- many opportunities were available for involvement in extracurricular activities in one's interest/talent area (e.g., drama productions, choir)

Also, the students generally did well in their studies. Marks were high (in the 80's and 90's) for three of the students; they each received Rutherford Scholarships in their high school years. The fourth had high marks in some courses, and average in the remainder (with the exception of math which had to be repeated).

Some drawbacks were encountered by students. They included the following:

- difficulty of maintaining one's motivation in some instances
- problems in organizing one's time (tendency to spend much time on topics of interest with an end result of being pressed in other subjects)
- limited learning through peer interaction; too few occasions for group work and seminars
- honours courses not available in earlier grades
- difficulty in getting help from teachers (due to their schedules, waiting line to see them; extensive help was difficult to obtain)
- uninteresting, unchallenging course material (e.g., in social studies) in some instances due to the approach to learning (reading a large amount of textbook material, learning by memorization); some

courses could be better presented in a classroom situation

- shortage of learning materials (texts), poor library facilities, poor teachers in some instances, too rigid adherence to the Alberta curriculum in some programs

Also of concern to students was their inability to achieve their program goals within three years. Three of the four students returned for a fourth year: two to obtain maths and sciences needed for an advanced diploma and one to acquire the credits needed for a general diploma.

Parents (three who had returned questionnaires) also expressed a high degree of appreciation of the advantages the program offered to their daughters. The most advantageous feature, according to their views, was the program's flexibility. It allowed their daughters to pursue their individual interests (in music, drama, sports) with the intensity desired, to expand their particular gifts/talents, and also maintain excellence in their academic studies. Drawbacks indicated by parents generally included those indicated by their daughters.

The teacher-advisors (TAs) indicated that the program well suited the students' needs. Advantages were students' opportunities to advance at their own rate: they were not held back by others and therefore, did not become frustrated with the pace of learning as gifted students sometimes were in a structured program. The wide variety of activities which students were able to fit into their schedules also added an enrichment component to the program: students were able to explore various interests, and develop a range of abilities and talents in addition to academics. The flexibility of the program also allowed students to pursue their interests and to conduct indepth studies in their passion areas.

TAs indicated that three of the students were doing very well in their studies. These three had excellent marks and were working to potential in their studies. The fourth student, according to her TA, was not maximizing her abilities. Problems were her disorganization, procrastination, and lack of self-discipline. She had showed some improvement over her high school years, but had yet to reach a level of maturity which would empower her to realize her potential.

Private school: Calgary

The student had an unsettled high school history prior to entry into

the private school. She had transferred back and forth between Western Canada and Bishop Carroll three times. She skipped classes, and ultimately failed her grade 11 year. The parents offered the option of a private school when the student expressed a willingness to try to complete her education.

Her failure stemmed from lack of motivation in high school. The student indicated that she had not developed a sense of belonging in the schools she attended: she felt that no one cared who she was or if she attended school. Her mother indicated that she was negatively influenced by the "bad" crowd with whom she associated. According to the mother, the time had been very trying for the family, they had not realized that their daughter was skipping classes, and when they became aware, the school did little to assist them in dealing the problem.

The private school proved of benefit to the student. She apparently appreciated the individualized attention received from teachers, their close monitoring of her progress, their adaptation of course work to suit her abilities, their high expectations, and their encouragement and support. Her marks had improved immensely. Also of particular merit, was the student's unique adventure of crewing a tall ship from the Orient to Europe as part of the school's program.

The parents also gained benefits from the school. They received assistance and support in dealing with their daughter's behavioural problems. Over time, the student's relations with her family improved, and home life became more enjoyable.

Disadvantages of the school were related to the fact that the school was small. The small student body was limiting socially and it also fostered more competitiveness amongst the students (e.g., marks, appearance, etc.). Also of concern was the difficulty the student might encounter in adjusting to university after several years of being in a sheltered environment.

The student felt she was reasonably prepared for her future endeavours. She felt she might have some problems in adjusting to university at first, but given her study skills and advanced knowledge in some courses, she felt she would handle her studies quite well. The student's mother, however, was uncertain as to the extent to which her daughter was prepared. Her daughter's goals changed almost on a daily basis and she was unrealistic about her options. Her marks were not

high enough to be accepted in the university of choice, and she had also failed her math 30. The mother indicated that the daughter had yet to develop the maturity needed to manage on her own.

Private school: USA

The student was one of eight in Alberta who received Heritage Scholarships to attend IB schools (funded by the Armand Hammer Foundation) situated around the world. The students were chosen on the basis of their high intelligence, verbal skills, motivation, and interest in community service. The student was placed in the USA school for two years - grades 12 and 13. (He had been in the Honours/IB program in Calgary for grades 10 and 11).

The experience in the IB school, on the whole, had been positive for the student. His level of academic achievement was high. The community service component of the IB program offered him opportunities to engage in and learn from activities outside of the academic environment. The school's promotion of student involvement also resulted in his participation in a wide variety of student activities, e.g., concerts, poetry readings, and skits. Also, he learned a great deal from interacting with students who came from many parts of the world.

The student experienced some difficulties in his final year at the school. He apparently had come into conflict with the school administration in regard to a change in policies which tightened the rules of the school. The student felt that the approach of the school was too rigid and that it did not offer satisfactory alternatives to students whose level of advancement had surpassed that of the course material. He could not see the merit of attending classes or handing in assignments when the material had already been assimilated. Overall, he felt that the school encouraged students to achieve high marks, but it did not inspire them to learn.

The student planned to enter university in the Fall of 1989. He planned a liberal arts degree with a major in math. He intended to acquire a PhD and then teach at a university level for awhile before entering a field either in economics, physics, or chemistry. The mother indicated she was pleased with the direction chosen by her son. She was happy to see that he decided to acquire a broad educational background and to develop his talents in other areas besides math.

Both the student and his mother felt that the student was prepared for his future endeavours in some ways but not in others. With respect to being prepared, the student indicated that his maturity and self-confidence would help him to manage on his own. His mother also felt that her son would fare well living on his own as he had gained independence while boarding at the USA school. With respect to being unprepared, both the student and his mother felt that his lack of self-discipline or his inclination to not extend himself to capacity on his own might end up being a problem.

H. STUDENTS WHO MOVED FROM CALGARY

Information in this section is based on four students (1 OC and 3 R) with whom contact had been maintained at each data collection period since their moving from Calgary. Also included is information on one other student (OC) whose parents returned a questionnaire since moving from Calgary (none returned by the student since the move).

Of the five students:

- all had moved with their families for reasons other than the education of the student
- four enrolled in their new schools at the beginning of their grade 11 year, and one enrolled in an Edmonton school for the second half of her grade 11 year and then transferred to Vancouver for her grade 12 year.
- four graduated from high school in the 1987-1988 school year, and continued to university in the Fall, 1988. The fifth graduated at the conclusion of the first semester of 1988-89 school year, and went on a working holiday to Australia for the remainder of the school year. She planned, on her return, to work for a year to finance her post-secondary studies.
- three had enrolled in special high schools or had taken special programs in their high schools since moving from Calgary. One had enrolled in a full IB program in a public school in Florida. A second had taken an enrichment program offered for gifted students in his school in Ontario. The third attended a private French school in Montreal.

Two of the students encountered problems in transferring to their new schools:

- one student was set back a grade in a Quebec school because she did not have required courses in French and History. However, this was

not felt to be a great disadvantage by the student as she graduated at the same time as her counterparts in Calgary - Quebec students graduated in what was the grade 11 year of students in Alberta. As well, she was already one year ahead as she had skipped an elementary grade.

- the student who moved to B.C. had difficulty in gaining credits for her Alberta high school courses due to different credit systems in place in these two provinces. She was required to take additional courses to make up the difference between the two systems.

Four of the five students generally did not have much difficulty in adjusting to their new schools:

- some initial difficulties were experienced (i.e., setting up a timetable, functioning in French as the day to day language, and making new friends), but these were overcome with time.
- little change was encountered from that of the last Calgary high school attended in regard to the difficulty/ease of their course work and their level of achievement. Marks in courses ranged from "good" to "excellent".

The fifth student encountered a number of problems. She indicated that she did not do as well in math and sciences compared to her achievement in these courses in Alberta; she had difficulties keeping up as the courses were more fast paced and the material more difficult. Also she had been unable to manage the heavy workload resulting from her attempt to make up within the school year the credits lost due her transfer out of province; she had become ill, missed a lot of school, failed several courses, and dropped out for the three months remaining in the semester. She returned for a fourth year in high school to gain the requirements needed for a diploma.

Some of the students indicated past experiences which they felt had an impact on their progress in their new schools. Those that proved advantageous to them were the following:

- interest in the field of science which was stimulated by a junior high science teacher in Calgary and participation in extracurricular activities such as the Science Fair and Science Olympics
- self-confidence and the love of learning which were promoted by the supportive environment of Oakley Centre
- knowledge that one can excel if effort is applied to studies (gained from past successes in academics)
- development of interpersonal skills

Past experiences which proved disadvantageous were the following:

- no background in a second language acquired in junior high (consequently the student was not eligible for special programs in high school which required a second language for entry or entry into universities)
- poor attitudes toward work developed at Oakley Centre (no pressures at Oakley to force unmotivated students to work and to learn)

All the students and parents felt that the last school attended in Calgary was more advantageous in some respects relative to the new school. Advantages offered by Calgary schools were the following:

- a higher standard of education
- the Honours/IB program
- more challenging courses
- independent studies program offered at Bishop Carroll and the wide range of courses and extracurricular activities offered in this school
- extracurricular activities such as Science Olympics
- better band program
- student familiarity with the grading system and how to apply oneself to receive good grades

One parent felt that the new school was more advantageous in some respects compared to the last school that the student attended in Calgary. In this regard, the student had the opportunity to take an enrichment program for the gifted in his high school years in Ontario. The program compacted three high school years (11, 12 and 13) into two.

Four of the five students were described as generally well-prepared for their future endeavours. Ways in which they were prepared were the following:

- a broad-based education (offered many future options)
- skills to manage post-secondary studies and life in general developed from experiences in the IB program (skills included time management, stress management, decision-making)
- establishment of clear goals and commitment to reach them; also the ability to handle failure if it arose
- exposure to university through SHAD Valley; student enjoyment of the university atmosphere and the challenge of higher level thinking and problem-solving
- qualifications for entry into university
- strong skills in a talent area (music)

Areas in which students could be better prepared were the following:

- workload and difficulty of work in university (high school offered little challenge which would compare to work at the post-secondary level)
- social development
- attitudes (student intolerance of less capable others)

The fifth student was described as somewhat prepared. Disadvantages indicated by the student were her not having a second language to ensure her acceptance in university, her poor level of achievement in physics, and poor finances to fund post-secondary studies. The student's mother also felt that her daughter needed to develop more maturity and self-discipline in order to handle her studies more effectively

All of the students and parents indicated that they would make changes if school years were repeated. Changes indicated by the students were the following:

- take a second language
- take a four year program in order to take advantage of options
- remain in the regular stream in grade 7 rather than attend Oakley Centre; avoid being labelled as gifted
- remain in Calgary until graduation

Changes indicated by parents were the following:

- testing at an earlier grade
- enrollment in a public rather than private high school; this would provide more opportunities for socializing with young people in the community
- participation in an athletic program throughout high school

I. STUDENT AND PARENT VIEWS: PROMOTING GIFTS/TALENTS OF STUDENTS

Retrospective views were obtained from students and parents regarding the promotion of students' gifts/talents. Matters of investigation included student and parent views of highly satisfactory aspects of the provisions made for gifted students at the high school level and those highly in need of improvement. Also, students and parents indicated whether students' gifts/talents had been realized in school years and whether post-high school experiences contributed to students' continued growth in this regard. As well, advice was solicited on various matters. Students were asked what advice they would give to schools in regard to educating gifted students similar to themselves, and what advice they would give to similar others in regard to choosing paths in

school years. Parents, in addition to advice they would direct to schools, were also asked what advice they would give to other parents in regard to educating their gifted children.

Provisions made for the gifted/talented in high school

In regard to the provisions made for the gifted/talented in high school, a sizable proportion of CBE students in each group (35% to 40%) did not think there were any or could not think of any aspects which were highly satisfactory. All but a small percent of the students (16% to 17%) identified aspects which were highly in need of improvement. A sizable percentage of parents in each group did not identify any highly positive aspects (36% to 48%) or aspects in need of improvement (44% to 67%). Parents, on the whole, may have felt too uninformed to make comments in this regard.

Highly satisfactory aspects of the provisions made for the gifted/talented involved a number of different features of the students' high school program.

- Most frequently indicated by students and parents were the various opportunities which special programs such as Honours, IB, STRETCH, Bilingual, and U of C science enrichment afforded.
- Other aspects identified included approaches which accommodated individual students' needs, interests, and abilities (e.g., allowances for independent work, an accelerated pace, and absences from class for special out-of-school events); various programs/courses or activities available in the students' interest or talent areas (e.g., music, sports); opportunities for challenges in one's area of expertise (advanced courses, contests and competitions, role as a teaching assistant); and the diversity of opportunities offered in schools.
- Also mentioned were facets of the learning environment and the approach of teachers; in this regard, of merit was the expertise of teachers and their willingness to help individual students, the emphasis placed on achievement and the opportunities available for students to excel, the opportunities available for gifted students to interact with those of comparable intelligence, and the recognition and support given to those who are academically gifted or artistically talented.
- Also of high merit to some, were the opportunities which integration in a regular program offered; students were able to avoid being labelled or singled out as being different, and had a chance to interact with and learn from students coming from diverse

backgrounds.

Aspects highly in need of improvement identified by students and parents involved a broad range of issues. Most frequently mentioned were perceived needs in the areas of special programs and programming in general.

- With respect to special programs, a need for more within schools was indicated by respondents; suggestions included the need for IB or grade 12 Honours in schools which did not offer these programs, alternative programs to those available to students (e.g., other than IB, Bilingual), more enrichment type programs, and programs for the gifted at the high school level similar to that offered in earlier grades at Oakley. Other respondents indicated the need to improve aspects of special programs operating within schools. Included in this regard, was the need for greater access to special programs, better communication to students about what special programs were available and what they entailed, expansion of the number of courses offered within such programs as Honours, extension of semestered programs into a full year, more interesting or stimulating programming, improved organization of programs (e.g., establishment of clear program goals), greater teacher expertise in enrichment programming, smaller classes, a fair marking scheme for courses taken in special programs, and more recognition from universities for special course work taken in high school.
- With respect to programming in general, most comments made by students and parents referred to the need for more program flexibility, individualization, and enrichment. Aspects mentioned were the need for more challenging/stimulating programs and the provision of more opportunities to do independent work, to work at one's own pace and ability level, to receive advanced standing in course work, to pursue one's own interests when ahead in one's work, and to organize one's timetable to suit one's own needs. Also mentioned was the need for the provision of more encouragement to students to develop their gifts/talents, and more freedom to explore a variety of areas of study, to specialize in particular areas of endeavour, and to chose only those courses needed to reach one's goals (i.e., not have to take required courses unless they were of interest). Also of importance was the need for less emphasis on academics and marks, and greater emphasis on originality and expression of one's personal views.

Other areas of high need indicated by respondents mainly concerned

various courses/activities offered in schools, the teachers, and student support and relations.

- Needs indicated by respondents in regard to courses and activities included more or different options, a broader range of extracurricular activities, more field trips, more opportunities for those who are non-achieving or are gifted in ways other than academics, and more courses/activities which are of interest to gifted students and which do not interfere with regular school work. Also of importance was the need to reorganize the curriculum to exclude irrelevant topics, to construct courses which are of practical value to students, and to offer classes to help students with study skills and any other weaknesses they might have.
- With respect to teachers, respondents indicated the need for greater expertise amongst teachers, more caring teachers, teachers who promoted good relations with their students, and teachers who were aware of the needs of gifted students and were trained in gifted education.
- In regard to student support and relations, respondents indicated a need for better treatment of gifted students, a support system for gifted students to help them cope with problems, more opportunities for gifted students to work and socialize with each other, and more attention directed to the problems which gifted students faced (e.g., labelling, sense of isolation, underachievement). Parents also added that they, in addition to their sons/daughters, required more support from the school (i.e., more communication regarding their sons'/daughters' progress in school and more guidance in helping children at home). The need for earlier identification of gifted students was also mentioned by a parent.

Retrospective views regarding the provisions made for gifted students in Calgary schools were also obtained from the students and parents who had moved away. Highly satisfactory aspects, according to these respondents, were the special programs offered in Calgary schools (IB, the Bishop Carroll program, and the Oakley Centre program). In regard to high needs, a range of views was expressed. Indicated was the need for more support and recognition of gifted students, and more CBE Board support for gifted education in general. More attention to the needs of elementary students was also indicated; in this regard, it was felt that more enrichment and challenging programs should be provided at this level of schooling. A different approach to educating the gifted was also suggested. In this latter regard, it was felt that special attention should be avoided as this approach marks gifted students as

being different. Instead, programming should be individualized such that all students, gifted and otherwise, have opportunities to develop their strengths and overcome their weaknesses.

Advancement of gifts/talents

A small percentage (27% OC and 10% R) of Calgary high school graduates, in retrospect, felt that in their school years they had advanced their gifts/talents to the extent to which they were capable. A large percent (47% OC and 69% R) expressed an opposing opinion, with the remainder indicating an inability to make a judgment. The R group moreso than the OC group felt that they had not realized their potential.

The percentage of parents of OC students who felt that sons/daughters had realized their potential was generally comparable to that of the students themselves. A larger proportion of parents of R students (about one-third) than the students themselves, however, felt that sons'/daughters' potential had been realized in school years.

A number of facilitating and hindering factors in school years were identified by the students and their parents.
With respect to facilitating factors:

- Most frequently mentioned were the advantages which special programs offered to students. Advantages of programs such as Oakley, IS, and STRETCH were the freedom they allowed students to explore various interests and to work in areas of special talent. A program such as IB provided its students with an advanced academic background and prepared them for post-secondary studies.
- Other positive factors mentioned were: the support provided by teachers and family, the stimulation received in interacting with other gifted students, the recognition (awards, scholarships) given to those who excelled, programming which allowed students choices and flexibility to pursue interests, and various options and extracurricular activities which afforded students the opportunity to explore and exercise their gifts/talents. Also included were students' personality and learning approach, i.e., their confidence in trying new things, willingness to risk failure, competitiveness, self-iniative, and eagerness to learn.

Hindering factors were the following:

- Approach of teachers. Aspects which were hindrances were the inexpertise of some teachers, their unwillingness to find answers to students' questions, and their unwillingness to recognize and accom-

modate differences/talents amongst students. Also mentioned was the educational system itself; problems were the large classes, the insufficient time available for teachers to work with individual students, and the emphasis placed on students' meeting the requirements needed to graduate rather than on their learning.

- Programming. Hindering aspects were poorly organized programs (lacking direction), inconsistencies in programming over time (little continuity or cohesiveness in quality of instruction and program structure), rigid structuring (little allowance for advancing at a faster pace, expressing creativity, exploring areas of interest), and unstimulating course work (slow, repetitive, little challenge or incentives to learn).
- Special programs. Hindrances included the limited programming support available to gifted students; in this regard, it was felt that little programming was in place for the gifted particularly at the elementary and senior high levels, no programming follow-up of gifted students in some cases was conducted after their identification, students' giftedness was not acknowledged by schools, and no special or consistent effort was made to advance students' gifts/talents. In addition, special programs in place were found to hinder the advancement of gifts/talents. Disadvantageous to those who took IB was the program's structure, workload, and its imposition on the time students had to take options and take part in other activities of personal interest. The Oakley program and the freedom it offered its students was considered a problem by some students who needed more direction from teachers to prosper.
- Motivation and attitudes. Some students indicated they invested little energy in striving to reach their potential. Hindrances in this regard, according to the students, were their boredom in school, laziness, little significance attached (on their part) to their gifts/talents, unawareness of any particular gifts/talents, unformed goals and disorganization, involvement in other pursuits, avoidance of appearing different, rebellion against expectations placed on gifted students, and little incentive received in their studies to excel. One student indicated that teachers assigned high marks irrespective of the quality of her work; she felt that teachers were either blinded or intimidated by the gifted label.
- Assistance and support of students. Hindrances in this regard was the little emphasis or assistance given to students to develop effective learning skills, overcome weaknesses, and foster motivation.
- Personal, social, and home factors. Hindrances were such aspects as

students' emotional immaturity, association with the "wrong people", shyness, and home responsibilities and limited finances which curtailed opportunities to take part in extracurricular activities.

A range of views was expressed by the students in regard to the opportunities offered by post-secondary institutions. A sizable minority of each of the groups of students (38%) felt that they encountered adequate opportunities to promote their gifts/talents. A larger percent of the R group (46%) compared to the OC group (15%) indicated the opposing view. A larger percent of the OC group (27%) compared to the R group (8%) felt that some aspects were adequate whereas others were not. The remainder, most of whom were the OC group (20% versus 8%), did not offer an opinion. Overall, the R group appeared to have a more negative view than did the OC group.

Students identified a number of positives and negatives with respect to the opportunities offered at the post-secondary level of studies to advance their gifts/talents. Factors which facilitated the expansion of gifts/talents included the following:

- the range of opportunities available at the post-secondary level from which the students could choose those of most benefit
- students' freedom to pursue studies in interest areas and to specialize in a talent field
- the opportunities to acquire greater knowledge and understanding, and to exercise one's skills and abilities in lab work, research projects, and extracurricular activities
- the challenge encountered in course work, competing with others, and having an unlimited scope for improving one's abilities and achieving excellence
- encouragement of creativity, innovative ideas in course work

Factors which were hindrances were as follows:

- the impersonal atmosphere (large classes, anonymity of the individual, tendency to be a "face in the crowd")
- freshman year (first year courses are limited in scope; students are uninformed about the range of opportunities available to them)
- students' inability to take advantage of available opportunities as a result of poor work/study habits and little experience in handling work of a challenging nature
- little time/flexibility remaining in one's schedule to pursue interests or develop particular talents
- unstimulating course work (unenthusiastic professors, uninteresting material, learning by memorization, little opportunity to use one's

imagination and creativity).

Of the nine students who engaged in pursuits other than studies in university in their post-high school year, one felt that his activities offered him opportunities to use and advance his gifts/talents and one indicated both positives and negatives in this regard. One of these individuals indicated that his ease in learning was of great benefit to him in his job; in addition he was heavily engaged in musical pursuits and athletics, both of which were talent areas for him. The second individual indicated that his job did not require much skill from him; however, in his off-hours, he continued his musical interests, playing in a band and writing music. The remainder of the former students indicated that their post-high school endeavours offered them little opportunity to use or expand their gifts/talents. In this regard, the jobs they held were unrelated to any field of interest or talent/strength. Also, the year was considered a time-out period; one student had used the time to make decisions about his future and to learn a little about living on his own.

Advice to schools

Advice offered by graduates to schools in regard to educating gifted students similar to themselves entailed the following:

- Special needs of gifted students. Indicated by students was the need for schools and the system to recognize and support the special needs of gifted students. In this regard, students suggested more funding for gifted education; the creation of more or better programs for the gifted; hiring of more teachers trained in gifted education, the promotion of the gifts/talents and the interests of students, and recognition of their achievements. Also indicated was the need for special attention in early school years.
- Method of educating gifted students. Recommendations of best approaches differed amongst the students. Included were acceleration through school years, grouping gifted students in a congregated setting, and integrating gifted students in a regular program. Comments made in regard to integration indicate that some felt the gifted should not be treated any differently than other students in the regular classroom whereas others felt gifted students should be required to do more work or allowed to work through the material more quickly than the regular student. These latter students felt that more demands should be placed on gifted students in regular classes in order to prevent them from coasting through school.

- Choices. Indicated by students was the need for schools to recognize differences amongst gifted students: some wanted additional stimulation whereas others were happy with the opportunities available in the regular classroom. Advice of students was the provision of a wide range of programs and activities from which students (who elected to take part) might choose the ones of interest to them. Suggestions included competition and enrichment for those who wanted to engage in such activities.
- Treatment of gifted students. Students suggested that special effort be made by schools to ensure that gifted children fit in with the "normal" population. Treatment of students as elite or different, according to students, lead to problems of their alienation, their becoming arrogant and intolerant of less capable others, and their using their intelligence to coast through school. Also, imposing high expectations could lead to their rebellion and their refusal to do no more work than a bare minimum to get by.
- Special programs. Needed was a variety of special programs to accommodate needs and interests of gifted students (e.g., academic programs such as Honours and IB to challenge students, flexible programs such as IS and PEP to provide opportunities to students to advance at their own rate, and enrichment programs such as STRETCH to maintain the interests of gifted students). Also suggested was greater communication to gifted students of the availability of special programs offered outside of school (e.g., SHAD Valley, Encounters with Canada, Forum for Young Albertans).
- Flexible programming. Recommended was the allowance of more freedom to gifted students: to work on their own and a speed suitable to their abilities, to explore various interests, and to determine the manner in which work would be accomplished. Such aspects, according to students, would stimulate their interests and motivation, encourage them to take responsibility for their own learning, and provide them with opportunities to use and expand their gifts/talents.
- Individualized education for the gifted. In this regard, needs indicated by students were challenges in areas of giftedness/talent to motivate and interest the students and assistance to overcome areas of weakness.
- Balance between freedom and structure. Students recommended that schools ensure that gifted students acquired the basics prior to allowing them to delve into ideas of their own. Essentials included learning the basic curriculum, work/study habits, and self-discipline. It was suggested that particular effort be directed by schools toward teaching gifted students how to study and also

monitoring their work more closely to ensure that they were learning the material and not falling behind.

- Modes of learning. Various modes of learning were identified by students as advantageous for them. Included were opportunities for active "hands-on" learning, class discussions, group work in addition to independent work, and lab work (learning by experimentation rather than memorization of text material).
- Options and extracurricular activities. The provision of a wider variety of options and activities was recommended by students. These would offer students opportunities to explore and use their gifts/talents, and also offer them a more-rounded, balanced educational experience.
- Support. Indicated was the need for schools to stimulate students' interests and to encourage them to strive to reach their potential. Suggestions in this regard were the provision of opportunities to students to learn new things, and engage in activities which required the use of their intellectual abilities and imagination. Also, more attention to the needs of those who were artistically inclined was suggested, as well as devising activities to motivate those who were coasting or lazy. In addition, more understanding of gifted students was needed, i.e., their fear of failure, frustrations and impatience with difficulties encountered in learning, and their defensive reactions to such feelings.

Other aspects mentioned by students concerned the need for schools to provide good teachers and well-organized programs, and to teach advanced courses in order to prepare students to a greater extent for post-secondary studies. Also, counselling of students who had a broad range of skills and abilities was recommended as these students needed help in determining which direction to channel their efforts.

Parents advice to schools in regard to educating gifted children similar to their own covered a range of matters. Mentioned most frequently was the need to provide support and special programming for the gifted (i.e., provide system level support for gifted education in terms of funding and Board's recognition of the special needs of the gifted; re-establish an Oakley type school; provide special programs/classes for the gifted, a K - 12 Oakley program, segregated programs for the gifted, programs for the gifted in high school, and teachers trained in gifted education). Other aspects mentioned were the need to

- keep gifted children in the mainstream (but find a way to promote their gifts/talents)
- identify and track gifted students from an early age

- identify a students' particular gift/talents, provide feedback to the student and the family in this regard, and help/encourage the student to develop these gifts/talents
- maintain/ensure the continuity of special programs such as IB, the bilingual program, PACT
- individualize programming
- provide opportunities for independent studies
- offer a Bishop Carroll type program in the public school system
- acquire better teachers
- reduce the teacher-student ratio
- build a strong foundation for all learning
- ensure equivalency of academic standards (i.e., in math) to other provinces (Ont.)
- offer a variety of learning experiences, choices, and challenges (to meet the needs and motivate all types of students); provide opportunities for learning in non-academic areas (e.g., stress management, creative negotiating, managing change); encourage participation in extracurricular activities (debates, public speaking, contests) and also special programs outside of school (e.g., student exchange program)
- allow gifted students to set their own goals (they are self-motivated and will achieve them for their own satisfaction)
- set high standards for gifted students and expectations of their being met
- teach learning skills (work, study, reading, self-responsibility) and discipline gifted children to produce the quality of work of which they are capable
- attend to gifted students' personal development (provide support and encouragement, build confidence, teach them to accept themselves and respect others, help them understand their giftedness and how to deal with it)

Advice to Gifted Students Re: Choosing paths in school

Students' advice to similar others in regard to choosing paths in school years involved a wide range of suggestions. Most frequently recommended by the students was the pursuit of a broad-based education (e.g., advice was to diversify, take a variety of courses, become involved in a range of activities both in and out of school, explore various interests, obtain a full complement of sciences, extend oneself beyond particular areas of strength). According to students, a broad range of experiences was advantageous as one's interests were

maintained in school years and one's future options were expanded. Other recommendations indicated by students included the following:

- select a school which will best meet your needs
- remain in the mainstream rather than attend a special school such as Oakley. According to four OC students, the regular program offered sufficient avenues for developing one's gifts/talents and was advantageous with respect to promoting one's social adjustment. Also, by attending a regular program, one avoided the creation of maladjusted attitudes (misguided sense of superiority, sense that one did not have to work as others did to demonstrate one's capability) which programs such as Oakley fostered.
- be resigned to the limitations of the regular program. Students (3 OC and 1 R) felt that the regular program offered few opportunities for the gifted (education geared for the average). They felt that, nevertheless, one had to do one's best in the system as one did not have any other alternatives from which to choose.
- make an informed choice with respect to taking special programs. Students indicated that programs such as IB and Immersion were not suitable to everyone and that other programs (e.g., options) might in fact offer the kind of stimulation which would best accommodate needs.
- seek out special programs (if they are of interest, if one wants the challenge such as that offered by IB or a more flexible approach for studies such as that offered in IS or Bishop Carroll)
- seek out courses which are taught by good teachers (stimulating teachers, expert in their field, who encouraged thinking rather than rote learning)
- select courses wisely (choose on the basis of their future value rather than on friends' enrollment)
- set goals, work hard, attempt to do well in all classes, and develop the skills and attitudes needed to manage one's studies effectively (a work ethic, study skills, self-discipline, and independent learning skills)
- develop a desire to learn, and strive to excel (use your own iniative to interest and challenge yourself in course work)
- do not let oneself become bored, lose motivation, and get poor marks due to lack of effort; initiate change if one is discontent (e.g., change schools, become involved in school activities, try new things for challenge)
- select the matriculation route
- take a less pressured route through school; have fun, take it easy, do things you enjoy, take some courses which are non-matriculation,

don't be overly concerned about marks as one just has to do well on the diploma exams
- take advantage of opportunities which appeal to you (don't let the opinion of others determine your choices, and don't become too overly focussed in academics); do what you enjoy the most rather than what you are best at
- achieve a balance; do well in your studies but also leave time for such things as sports, music, and a social life
- be outgoing and friendly in order to have companionship in school
- gain an understanding of what it means to be gifted, and how you fit in with others (don't be overconfident but also do not underestimate your abilities, learn to use gifts to reach goals such as scholarships and awards rather than to inflate one's self-importance, understand that a "gift" is not a free ride, and understand that all people gifted and otherwise have a contribution to make to the world)
- take advantage of the gifted label as one has little choice in the matter anyway

Advice to parents re: educating their gifted children

Advice offered to other parents in regard to promoting the gifts/talents of their children was the following:
- advocate for gifted programming at the system level and for your child at the school level
- be involved in your child's work and keep informed about what is happening in the school
- arrange your child's schedule such that he/she will be taught by teachers who care
- enroll your child in a special school or program
- expose your child to a variety of learning experiences; encourage growth in all aspects, not just academics
- find outlets other than school to develop your child's abilities
- enrich your child's home life to make up for deficiencies at school
- encourage your child to accept challenges, risk failure
- interest or challenge your child early in his/her school years
- encourage your child to strive to reach his/her potential (indicate support, and motivate him/her by instilling a sense of value for excellence and its pursuit)
- work with your child at home (lay ground work for self-esteem, confidence in risk-taking, social consciousness, and a balanced view of life)

- provide loving support, encouragement, unconditional acceptance
- help your child deal with stresses resulting from taking challenging programs (e.g., IB)
- allow time for your son/daughter to be a child; do not allow him/her to be pressured by teachers to be the top of the class
- allow your child to set his/her own goals
- expect your child to be responsible for his/her own choices; insist on a certain level of involvement and commitment
- give your child a choice as to whether or not to enroll in special programs
- teach your child to accept his/her differences but also to recognize others' merits
- work on your child's social skills
- impart the wisdom and knowledge gained from your experiences, and encourage them to seek their own as well

Calgary students behind a grade (2) and those in private schools (2) were also asked what advice they would offer to schools and similar others. Advice to schools offered by three students who were behind a grade included the following:

- provide opportunities such as special projects in which students may pursue their interests and develop their potential
- offer a variety of courses from which students may choose areas of particular interest to them
- provide individualized support to the student (have teachers who know the student, are aware of his/her potential, and care about his/her progress)
- acquire more involved interested teachers, and reduce the student-teacher ratio so that they would have time to adapt courses to meet individual student's interests
- do not single out gifted students and consequently make it difficult for them to fit in with others in the school

Advice to similar others offered by those behind one grade was as follows:

- choose a school which will meet your needs
- acquire a broad-based background
- strive to reach your potential
- attempt to maintain interests and efforts in school work (i.e., avoid becoming discouraged or bored)
- recognize the importance of an education, and attempt to work harder in your school years
- find a good way of handling the gifted part of oneself and fitting

in with others

The fourth student who was in grade 13 indicated that schools should encourage students to learn; in this regard, he felt that gifted children had an innate curiosity and that the role of the teacher was to provide an environment which stimulated them to explore and learn on their own. Also, he indicated that students should explore a variety of interest areas and broaden their experience base. In addition, he felt that they should realize that the advancement of their education was their own responsibility and that they should not rely on the school to be the seat of learning.

IV. GENERAL FINDINGS

Findings in the study were as follows:

1. The students on the whole were successful, well-adjusted individuals. The majority were engaged in a variety of pursuits both in and out of school. They displayed considerable abilities and skills in various domains, had a positive view of themselves and their capabilities, had good relations with their teachers and peers, and had a positive approach to learning. A majority received recognition for their skills and abilities in their high school years, and also held leadership positions in in- and out-of-school activities or organizations. The majority also attained a high level of achievement in high school courses and received the advanced diploma with the award for excellence on their graduation. Most of those who moved on to university were successful in their first year of studies.

2. Almost all of the students in their grade 10 year were able to enroll in schools which were their first choice. The majority of students and their parents indicated that the selected high schools met some if not all of their expectations. Only three students who remained in the CBE system throughout their high school years had changed schools in this time period.

3. The OC and R students generally were comparable with respect to their skills, abilities, and progress in academic, personal, and social domains.

4. Achievement of the two groups of students in core courses was generally comparable. Marks, on average, were high and relatively stable across high school grades.

5. The grade 10 year was a transitional year for both groups of students. Both groups indicated a decline from grade 9 to 10 in positive views of aspects of school life (teachers, peers, and school work) and a rise in feelings of frustration and pressures from various sources. In the remaining high school years, there was a gradual recovery of students' sense of well-being with respect to teacher and peer relations and enjoyment of school work. Frustrations and pressures declined in grade 11, and either stabilized or increased in grade 12

with the arrival of diploma exams and graduation. Differences obtained between groups indicated that the OC group enjoyed course work over grades 9 through 12 to a greater extent than did the R group. The OC group also expressed less boredom in school in grade nine.

6. Personal well-being of students remained relatively high and stable across grades 9 through 12. Aspects of well-being included students' self-esteem, self-confidence, self-responsibility, and motivation.

7. Math and the sciences apparently were more difficult areas of study at Oakley Centre. OC students tended to find work in grade 9 math and the sciences less easy than course work in these subjects in grade 10. In comparison, the R group found math and the sciences more easy in grade 9 than did the OC group. However, in grade 10 the R group found that work in these subjects was more difficult relative to grade 9. In high school, the R group found course work in these subjects either as easy or less easy than that indicated by the OC group.

   The level of difficulty of course work in social studies remained stable across the grades for both groups. In English, level of difficulty fluctuated across the grades, becoming less easy at the 10 level, more easy at the 20 level, and less easy at the 30 level for both groups.

8. Students' level of satisfaction with achievement and teacher assistance gradually declined from the grade 9 course level through to the 20 course level, and then recovered to some extent at the 30 course level. Up to 30% of the students indicated dissatisfaction with their progress and their teachers in various core subjects at the 20 level.

9. The majority of teachers in grade 10 and 12 felt that their program of instruction adequately addressed the needs of the students. Problem areas of any size in the core courses were in math and the sciences. From 25% to 30% of the teachers instructing R students in chemistry and math in grade 10 and biology in grade 12 indicated program inadequacy. Forty-two percent of teachers instructing OC students in chemistry in grade 10 felt the program was inadequate.

10. The needs of OC students apparently were best met at Oakley. A large percent (90%) of the students felt that they had encountered adequate opportunities to advance their gifts/talents in their grade nine year at Oakley, and also appreciated various aspects of programming at

Oakley which accommodated their abilities and interests. Ratings of the fulfillment of needs declined at the grade ten level, and remained at this lower level across the high school years.

11. Needs of the R group apparently were not as well met as those of the OC group. In grade 9, a small percent of the R students (35%) compared to the OC students (90%) felt that they had received adequate opportunities to advance their gifts/talents. Ratings in high school indicated that the R group's needs were better met relative to grade 9 but not to the same extent as that indicated by the OC group. The R group also felt that across grades 9 through 12 they would have profited from more opportunities which offered them an individualized, flexible, enriched approach to studies.

12. Parents' views with respect to the schools' accommodation of students' needs generally were comparable to those of their children. In addition, compared to R parents, OC parents were more satisfied with the school's efforts in grade 9 in informing parents about programs designed to meet the needs of the gifted/talented and the progress of their children in areas of gifted/talent. Both groups indicated a lower level of satisfaction in these respects in high school years compared to grade 9.

13. The majority of students and parents in both groups rated the quality of education received in elementary, junior high, and senior high years as above average. The OC group's rating of junior high years however, was superior to that indicated by the R group. The OC group also felt that the education received in junior and senior high was superior to that received in elementary.

14. The OC group, on average, was identified as gifted/talented at an earlier age than was the R group and received special instruction for a longer period of time in elementary and junior high years. More of the OC group than the R group also chose to take special programs in their high school years.

15. A small percentage of teachers in grades 10 and 12 were informed that the students were identified as gifted/talented. A larger percent of those instructing OC students in grade 10 (38% OC versus 17% R) were aware of the classification of these students. The percentage of those informed at the grade 12 level was approximately equal in the two groups (25%).

16. Oakley Centre experiences proved both advantageous and disadvantageous to its graduates in high school years. A large percent of the OC group indicated both positive (77%) and negative (63%) carry-over effects from junior high years. In comparison, a smaller percent of the R group indicated positive (52%) and negative (29%) carry-over effects. More positive than negative effects from junior high years were reported by R students.

17. The OC group moreso than the R group appeared to seek out various educational opportunities. More of the OC group (84% versus 50%) investigated the potential of various high schools prior to making a choice of which one to attend in senior years. A factor of more importance to the OC group compared to the R group in the decision-making process was the availability of special programs. The OC group also tended to look for advantages at the post-secondary level of studies - more of the OC group (31% OC versus 8% R) applied for advanced standing in university courses.

18. In most instances, a majority of those who took special programs in high school felt that the programs were worthwhile. Advantages of the programs ranged from the academic challenge encountered in such programs as IB and honours, flexibility in organizing one's studies offered in such programs as independent studies, and enrichment gained from programs such as STRETCH. Students tended to feel that the programs fostered the growth of skills and abilities in various domains and also prepared them for post-secondary studies. Disadvantages indicated by the students included the heavy workload, the time commitment required by the programs, and the high level of skills needed to do well in the programs. Other problems indicated by students were inadequacies in regard to aspects of program organization. Also mentioned particularly by those in independent learning situations was the difficulty of managing one's own studies effectively.

19. More of the OC group than the R group felt that they had received adequate opportunities to advance their gifts/talents in grade 9 and in high school years. A larger percent of the OC group also tended to feel that opportunities encountered in university to some extent contributed to the promotion of their gifts/talents.

20. A relatively large percent (58%) of the students felt they had not advanced their gifts/talents to the extent to which they were capable

in their school years. More of the R group than the OC group (69% versus 47%) felt that they had not reached their potential in this regard.

21. Various aspects of special programs were identified most frequently by students and parents as factors which facilitated the advancement of their gifts/talents. Other positive factors mentioned by respondents included the support and stimulation received from teachers and gifted peers, recognition given to those who excelled, various avenues (flexible programming, options, extracurricular activities) provided to students to explore and exercise their abilities and interests, and students' approach to learning. Many of the factors identified as hindrances to the advancement of gifts/talents involved limitations in the above aspects.

22. Almost all students identified areas of high need in regard to the provisions made for the gifted/talented in high school. Most frequently mentioned was the need to provide more special programs and to improve various aspects of those which were offered in high schools. Also, mentioned with frequency was the need for more program flexibility, individualization, and enrichment. Other aspects mentioned were inadequacies in regard to the range of courses/ activities offered in schools, the approach of teachers, and the support given to students in regard to their overcoming weaknesses and problems.

23. The majority of students (close to two-thirds) felt that the course of studies they selected in high school was the best possible choice for them. More of the OC group (71%) compared to the R group (55%) expressed a positive view in this regard.

24. A large proportion of the students (two-thirds) indicated they would make changes if they were to repeat their school years. A variety of changes were indicated.

25. Students generally did well in university. The majority felt well-prepared for post-secondary studies. They were able to take the programs/courses that they wanted or needed. The majority enjoyed their course work and social life on campus. Most of those who had received confirmation of their marks indicated they had passed their courses. Most of the parents felt their sons/daughters were successful students and were pleased with the direction they had chosen for

themselves.

26. Problem areas which involved a sizable minority of students were the following:

- Some students did not work to capacity in high school. In this regard, up to one-half of the teachers instructing in core subject areas in grades 10 and 12 felt that the students could have done better in their course work. Poor motivation and approach to learning apparently detracted from students' performance - around 20% of the teachers in grade 10 and 12 found the students lacking with respect to their self-motivation in learning, motivation to excel, and work/study habits. Up to 21% of the students themselves also indicated little interest in doing well in school.

- Up to one-half of the students indicated too easy courses and boredom with school at some point in their high school careers.

- Up to one-half of the students at some point in their high school careers indicated high pressure from their workload and from families to achieve high marks. Pressures due to the "gifted" label were felt by around one-quarter of the students in grades 9 and 10.

- One-quarter of the students felt that they received inadequate advice from their high schools in regard to selecting courses needed to reach their goals. Dissatisfaction in this regard was also indicated by one-quarter of the parents.

- One-half of the students encountered some difficulty in adjusting to academic work at the post-secondary level. One-quarter felt they were ill-prepared to handle post-secondary studies. Much of the difficulty apparently stemmed from the heavy work load encountered in university, and students' inadequacies in regard to work/study skills, independent learning skills, self-discipline, and motivation. More than one-half of the students (56%) felt that school should have better prepared them for post-secondary studies.

- One-quarter of the R group indicated some difficulty adjusting socially at the post-secondary level of studies. Problems stemmed mainly from leaving high school friends behind and establishing new relationships in university. No OC students indicated social adjustment problems.

- Two-thirds of the students were dissatisfied with their level of achievement at the post-secondary level. A more frequently indicated explanation for dissatisfaction was students' feeling that they could have done better with greater effort on their part.

27. Problem areas in school identified by a sizable number of parents were the following:
    - One-quarter of the OC parents and one-third of R parents were dissatisfied with the information they received regarding programs/activities available in high school grades which suited the abilities and interests of their children.
    - About one-quarter of the R parents were dissatisfied with the encouragement their children received in developing their gifts/talents in high school grades, the opportunities provided by schools to stimulate their children's interests in grade 10, and the assistance their children received in developing their work/study skills in grade 10.
    - One quarter of the OC parents were dissatisfied with the assistance their children received in grade 11 in overcoming their weaknesses and the expertise of teachers in developing their children's abilities and interests.

28. Various factors apparently constrained students' taking full advantage of opportunities offered in schools. According to student and parent comments, some students did not receive the benefits of the education offered as they were disinterested in school, had little motivation, and did not do as well as they could have with more effort on their part. Some also did not take courses of personal interest/value or participate in school activities to the extent they would have liked because of pressures evolving from a heavy workload, special programs such as IB, and the drive to achieve top marks for scholarships and entry into university. Others indicated that academically challenging courses (IB, Honours) were not open to them or not offered in their schools, whereas others with interests in non-academic courses were discouraged from taking them because they felt that little importance was attributed to such course work in high school.

29. Students, parents, and teachers generally felt that more individualized, flexible, and enriched programming would have been advantageous for the students in high school. Many of those who held this view, however, also perceived that the feasibility of programming of this

nature was limited by a number of factors. Hindrances included the rigidity of high school programming, large class sizes, class composition of a diverse range of student abilities, high emphasis placed on academics, heavy workload demands, and diploma requirements. Such factors, according to respondents, did not allow much flexibility to individualize programming for students, nor time for students to explore various interest areas.

30 In general, advice to schools offered by students in regard to educating the gifted/talented appeared to involve the following major areas of need:

- schools' and the system's recognition and support of the special needs of the gifted/talented (funding, programs for the gifted, training of teachers in gifted education, recognition of excellence, encouragement of students to strive to reach their potential)
- provision of a range of programs, courses, activities, and approaches to learning from which students could choose those best suited to their abilities and interests
- flexible, individualized programming (provision of challenges to students in areas of giftedness/talent and assistance in areas of weakness, allowances to work at a speed suitable to one's abilities and to pursue studies in areas of interest)
- balance between freedom and structure (need to ensure students' grounding in the basics - basic curriculum, work/study skills, self-discipline)
- personal development (need for understanding and help with such problems as students' sense of alienation, arrogance and intolerance of less capable others, rebellion against imposed expectations, fear of failure, and coasting through school)

Parents' advice to schools was similar to that given by the students.

31. Advice to other gifted students most frequently mentioned by students in regard to choosing paths in school years was the pursuit of a broad-based education. Exposure to a wide range of experiences, according to students, maintained one's interests in school years and also expanded future options. Other aspects mentioned included recommendations for students to:

- choose schools, programs, and courses wisely, on the basis of their suitability to individual needs and interests
- seek out programs, courses, activities which were advantageous (taught by good teachers, of interest or personal appeal, of merit

to one's cognitive development and future)
- gain an understanding of what it means to be gifted and how one fits in with others

Other comments indicated different philosophies amongst students in regard to what approach to take in learning. One view generally shared by most who offered advice in this regard was that students should attempt to work hard, develop skills needed to do well in school, strive to excel, and use their own iniative to maintain interest and challenge themselves in course work. Another view was that students should take a less demanding route through school - taking time to do the things they enjoyed and being less driven about attaining high marks until diploma exams. Another view espoused a balanced approach - students should attempt to do well in studies but also leave time for such things as sports, music, and a social life.

32 Advice offered by parents to others with gifted/talented children generally concerned the following spheres of involvement:
- parental involvement in their children's work and school and their advocacy for gifted programming at the system and school level
- parental search for opportunities advantageous for their children both in and out of school
- exposure of children to a variety of learning experiences (in addition to academics)
- encouragement of children to accept challenges, strive to excel
- encouragement of children to set goals, make their own decisions, and be responsible for their choices
- promotion of personal and social growth of children (self-esteem, confidence, social consciousness, self-acceptance, appreciation of the worth of others)
- parental assistance to children to help them deal with pressures (from high expectations imposed by teachers, special programs such as IB)